Drug Markets

October 1929

Established 1914

The Magazine of the Manufacturing Drug Trade

Editorials 329

Buying "Time"—High Priced Co-operation—Tariff and Income Tax—A Limit to Chain Size—Petition for a Conference—The Swing to the Buyer.

Feature Articles

Meeting with the Wholesalers 333

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Coming Issues

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Window Displays are much sought after by some manufacturers. We have met a drug trade manufacturer who thinks they are greatly over-rated, and who, in fact, places practically no value upon them. This man has actually followed up his purchases of window displays and will give facts and figures to prove his case.

Distribution Problems are somewhat relieved but, however, they are far from solved. We shall attempt to keep our readers completely abreast of all the latest tricks that are being inaugurated by both manufacturers and distributors to jump ahead of their competitors.

VOL. XXV — NUMBER 4

DRUG MARKETS, INC.
PUBLISHERS

Publication Office, 28 Renne Ave., Pittsfield, Mass. Editorial and General Office, 25 Spruce St., N. Y. City

Editor THOMAS R. FARRELL — President WILLIAMS HAYNES — Business Manager FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, POSTAGE PAID TO ALL COUNTRIES; THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES. PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE, AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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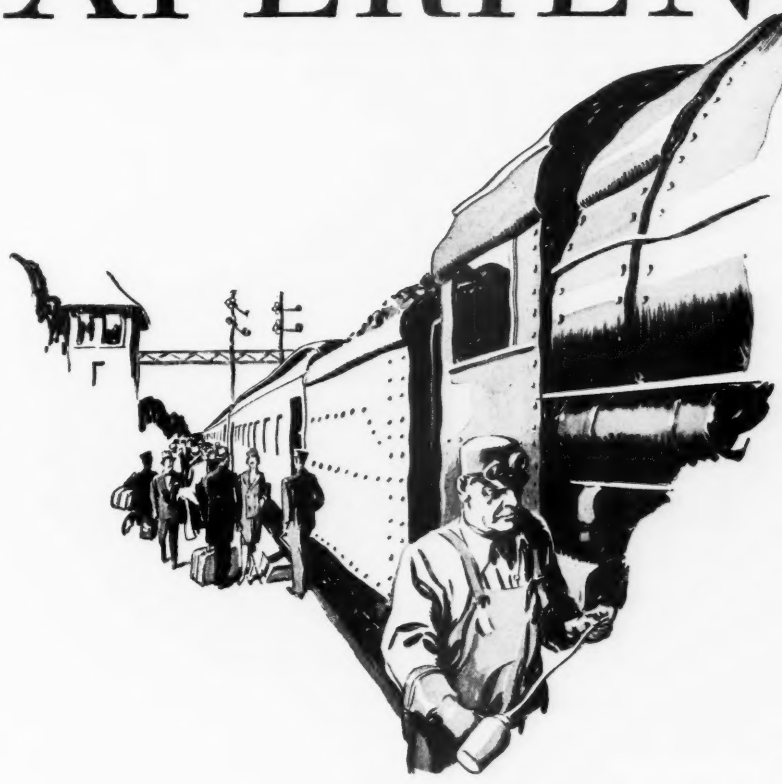
EXPERIENCE



IN the highly technical business of producing and distributing industrial chemicals—and especially compressed gases—there is no substitute for experience. One of the most valuable assets of the Mathieson organization is the broad background of experience gained by nearly forty years in the manufacture of chemicals. Because of this experience, Mathieson Chemicals possess an added value in the confident assurance of safety and satisfaction.

The MATHIESON ALKALI WORKS *(Inc.)*

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Philadelphia Chicago Providence Charlotte Cincinnati

Works: Niagara Falls, N.Y. Saltville, Va. Newark, N.Y.

Warehouse Stocks at all Distributing Centers

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Soda Ash
Caustic Soda
Liquid Chlorine
Bleaching Powder
Bicarbonate of Soda
Ammonia, Anhydrous & Aqua
H T H (Hypochlorite)
PURITE (Fused Soda Ash)
Sulphur Dichloride
Benzoyl Chloride

Benzoate of Soda
Benzyl Alcohol
Ethyl Vanillin
Benzaldehyde
Benzoic Acid
Coumarin
Vanillin

MATHIESON CHEMICALS

Buyers' Guide

RAW MATERIALS

ALCOHOL
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Pennsylvania Sugar Co.
The Rossville Com. Alcohol Corp.
U. S. Industrial Alcohol Co.

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Dodge & Olcott Company
P. R. Dreyer Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Magnus, Mabee & Reynard
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Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

BEESWAX
Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS
Wilson Laboratories

BORAX
American Potash & Chemical Corp.
Pacific Coast Borax Co

COLLOIDAL CLAY
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CHALK, PRECIPITATED
H. J. Baker & Bro.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

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Norwegian Cod Liver Oil Association

COAL-TAR PRODUCTS
Baird & McGuire, Inc.

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McIlvaine Brothers, Inc.
S. B. Penick & Company

DISINFECTANTS
Baird & McGuire, Inc.

ESSENTIAL OILS
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer, Inc.
Euro American Corporation
Benj. French, Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard
Newport Chemical Works, Inc.
Pfaltz & Bauer, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

FLAVORING MATERIALS
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer, Inc.
Euro American Corporation
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard
Ungerer & Co.
van Ameringen-Haebler, Inc.
Wangler-Budd Co., Inc.

GELATINES
Coignet Gelatines

GLYCERIN
H. J. Baker & Bro.
Will & Baumer Candle Co., Inc

LANOLIN
E. M. Javitz & Son, Inc.
Pfaltz & Bauer, Inc.

MEDICINAL CHEMICALS
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J. T. Baker Chemical Co.
Chas. Cooper & Co.
Dow Chemical Co.
Heyden Chemical Corp.
Hoffman-LaRoche Chemical Works, Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
Chas. Pfizer & Co., Inc.
Schering Corporation
Wilckes-Martin-Wilckes Co.

MINERAL OIL
M. W. Parsons Imports
Schliemann Companies, Inc.

QUININE
R. W. Greeff & Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.

SHAVING CREAM BASE
John Powell & Co., Inc.

VANILLIN
Euro American Corporation
Givaudan Delawanna Inc.
Mathieson Alkali Works, Inc. (Commonwealth Division)
Monsanto Chemical Works

CONTAINERS

BOXES (Corrugated)
Container Corp. of America

BOXES (Paper)
F. N. Burt Co., Ltd.

BULK CONTAINERS
Carpenter Container Co., Inc.

COLLAPSIBLE TUBES
Aluminum Co. of America
Bond Mfg. Corporation
New England Collapsible Tube Co.
Sun Tube Corp.
White Metal Mfg. Co.
A. H. Wirz, Inc.

GLASSWARE
Carr-Lowrey Glass Co.
Maryland Glass Corp.
Owens-Illinois Glass Co

CLOSURES

CORKS
Armstrong Cork Co.
Cork Import Corporation

INSIDE THREAD CAPS
Spring Stopper Co.

METAL CAPS
Aluminum Co. of America
American Metal Cap Co
Ferd Gutmann & Co.
National Seal Co.
Phoenix Hermetic Co.

VISCOSE CAPS
DuPont Cellophane Co.
Cellulose Cap Division

MACHINERY & EQUIPMENT

FILLING MACHINES
Alsop Engineering Co.
American Machine & Foundry Co
Arthur Colton Co.
Horix Manufacturing Co.
The Karl Kiefer Machine Co.
F. J. Stokes Machine Co.

MIXING EQUIPMENT
Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co.
F. J. Stokes Machine Co

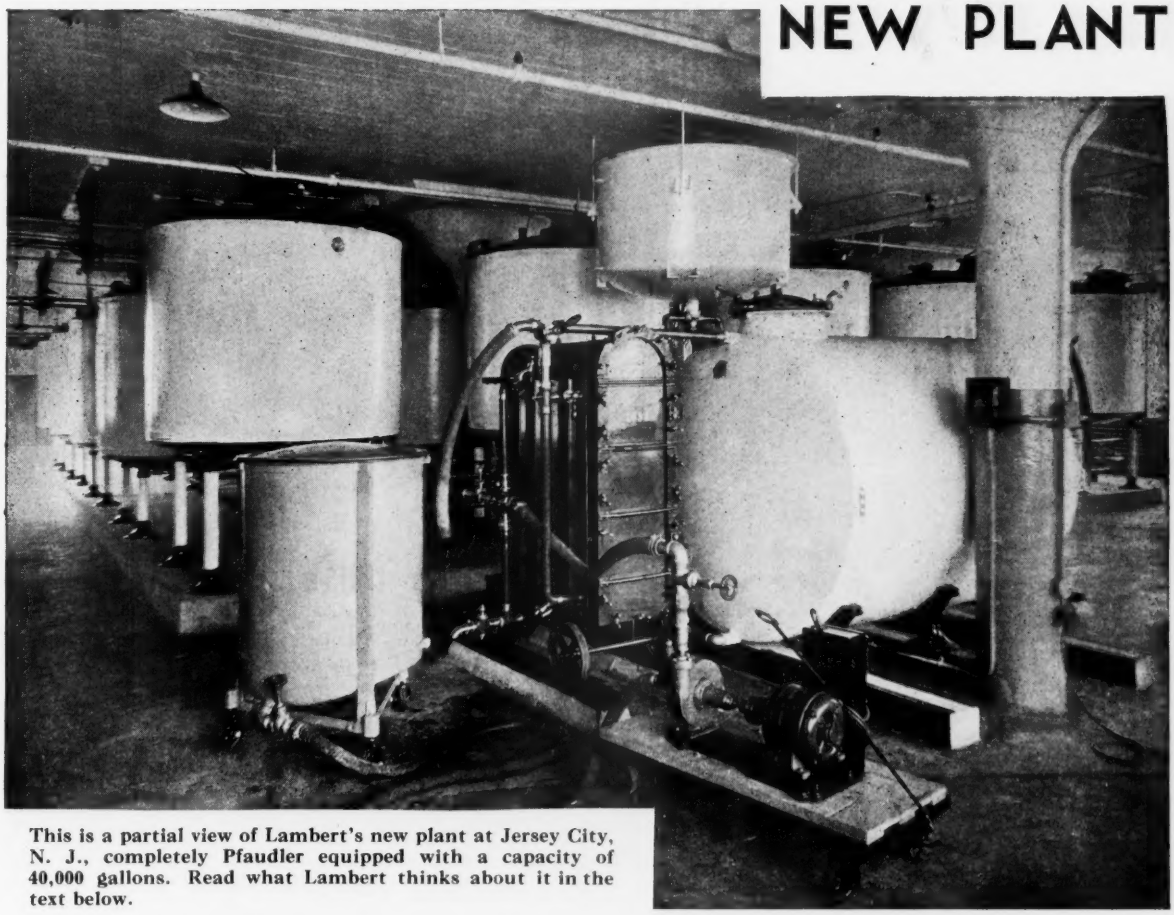
WEIGHING EQUIPMENT
American Machine & Foundry Co

PACKING & CARTONING
American Machine & Foundry Co.
Package Machinery Co.

LABELLING EQUIPMENT
Economic Machinery Co.

PHARMACEUTICAL MACHINERY
Arthur Colton Co.
The Pfaudler Co.
F. J. Stokes Machine Co.

40,000 GALLONS CAPACITY IN PFAUDLER EQUIPMENT INSTALLED AT LAMBERT'S NEW PLANT



This is a partial view of Lambert's new plant at Jersey City, N. J., completely Pfaudler equipped with a capacity of 40,000 gallons. Read what Lambert thinks about it in the text below.

"It is a pleasure to say that Pfaudler glass-lined mixing equipment has given us good service in every way." "Our recent order for our Jersey City plant is, no doubt, the best proof that we are satisfied with your equipment."

LAMBERT PHARMACAL CO., St. Louis, Mo.
(*Signed*) *ROB'T. L. LUND, General Mgr.*

The use of Pfaudler Glass-Lined Equipment in the plants of the Lambert Pharmacal Company has grown with the demand for their products. This is only one of many ways in which Pfaudler serves the industry. Pfaudler Glass-Lined Steel has proved its acid resisting qualities, being used for strong acids such as hydrochloric, nitric, sulphuric and so on, to mild corrosives without contaminating the product! Send for Catalog 689!

Pfaudler

THE PFAUDLER CO., *Chemical Division,* **Rochester, N. Y.**

NEW YORK
8 West 40th St.

ELYRIA, O.
Pfaudler-Elyria Div.

CHICAGO
1442 Conway Bldg.

SAN FRANCISCO
122 New Montgomery St.

GLASS-LINED EQUIPMENT AVERTS METALLIC CONTAMINATION

"NO, I've never used any of these, Marie, but that one with the maroon-colored cork* looks good."
"I was just thinking the same thing. I believe I will take it. At least it will be easy to use and that is more than I can say for some things I've bought lately."
*Every day, colorful, sales-appealing Armstrong's Embossed Top Corks are calling attention to the products they grace and helping to build sales volume for them. Armstrong's Embossed Top Corks, especially designed and colored to suit your needs, will make extra sales for you. For prices and complete information, address Armstrong Cork Company. 913 Arch Street Lancaster, Pennsylvania.

Armstrong's EMBOSSED TOP Corks

Handy as a Door Knob

J. A. WEBB, PRES. H. HALSEY MILLER, VICE-PRES. G. E. OSBORNE, TREAS.

SPIDER WEBB BRANDS

J.A.Webb Belting Co.

MANUFACTURERS OF LEA...

Bu...

FJS

STOKES Service

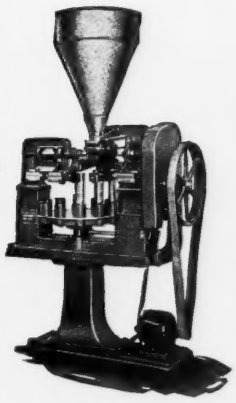
At the time we received the F. J. Stokes closing and filling machine our men had never had any experience in carrying on work of this kind. The machine was so well constructed and so automatic in operation that our business was placed upon an economical paying basis at once.

If there is anything we can do to assist the F. J. Stokes Machine Company for the splendid work they did for us, we will gladly do so.

Yours truly,

J. A. WEBB BELTING CO., INC.

JAW:AE



The special filling machine illustrated here was developed by us to fill extra large tubes. The comment above speaks for itself.

Whenever you have a special problem involving the designing and building of pharmaceutical equipment, let us please you as we did them. Our thirty-four years' experience should be of hard cash value to you.

STOKES Pharmaceutical Equipment

Tablet Making Machines
Drying Closets
Drug Mills and Mixers
Jacketed Kettles
Molds of all types

Bottle Washers
Percolators
Conveyors
Alcohol Recovery Apparatus

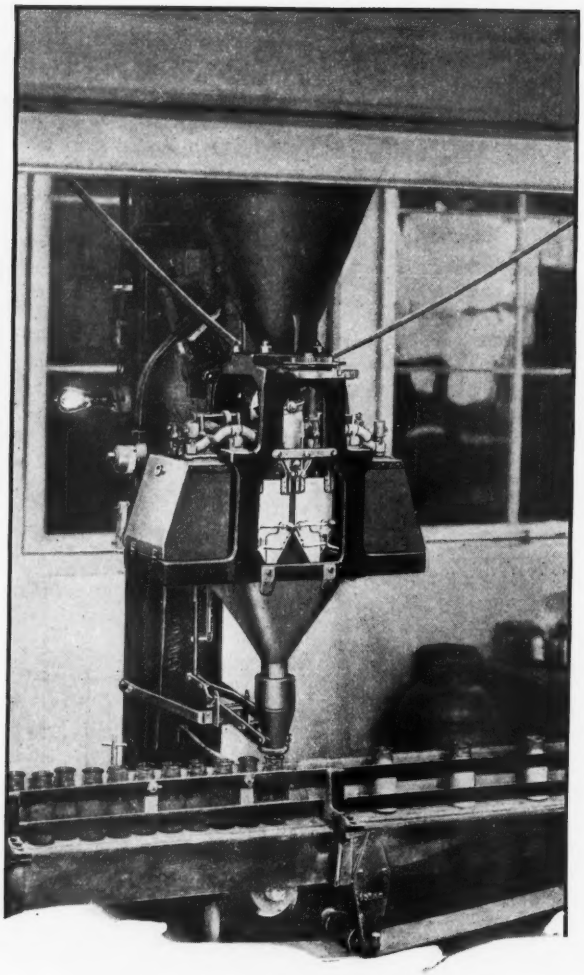
Write for information.

Vacuum Pans and Dryers
Water Stills
Tube and Jar Fillers
Powder Fillers
Special Machinery

FJSTOKES MACHINE COMPANY

Pharmaceutical Machinery since 1895

5932 Tabor Road, Olney P. O., Philadelphia, Pa.



The Continuous Stream Principle

FOR many years the No. 200 Automatic Continuous Stream double unit Scale has been saving money, time, material and labor in a large number of representative American plants.

The principle involved is simple. In one unit the feed hopper delivers material to the weighing bin in a large stream until the required weight is almost reached, then the stream is cut to a trickle until the scale balances. While this process goes on the other unit is discharging into the container below.

As a result, while one unit is weighing, the other is discharging, alternately; so that the material flows in a constant stream. And the accuracy is such that 90% of the discharges are balanced weights, with the remaining 10% within 1/16th ounce.

Capacities are from ½ to 80 cubic inches (about 20 ounces) at speed up to 50 per minute. Adapted to handle any powdered or granular material.

May we send you complete descriptive material ?

AUTOMATIC WEIGHING MACHINE DIVISION
AMERICAN MACHINE & FOUNDRY CO.
5502-5524 Second Ave. - Brooklyn, N. Y.

AUTOMATIC MACHINERY

BRILLIANT FLINT BOTTLES

By CARR-LOWREY

FINE products, dressed to display their charm and individuality have been packaged in Carr-Lowrey bottles for more than forty years.

¶ BRILLIANT FLINT GLASS from which the finest quality perfume ware is made, is used also in making PROPRIETARY and PHARMACEUTICAL WARE, on the latest types of automatic machinery.

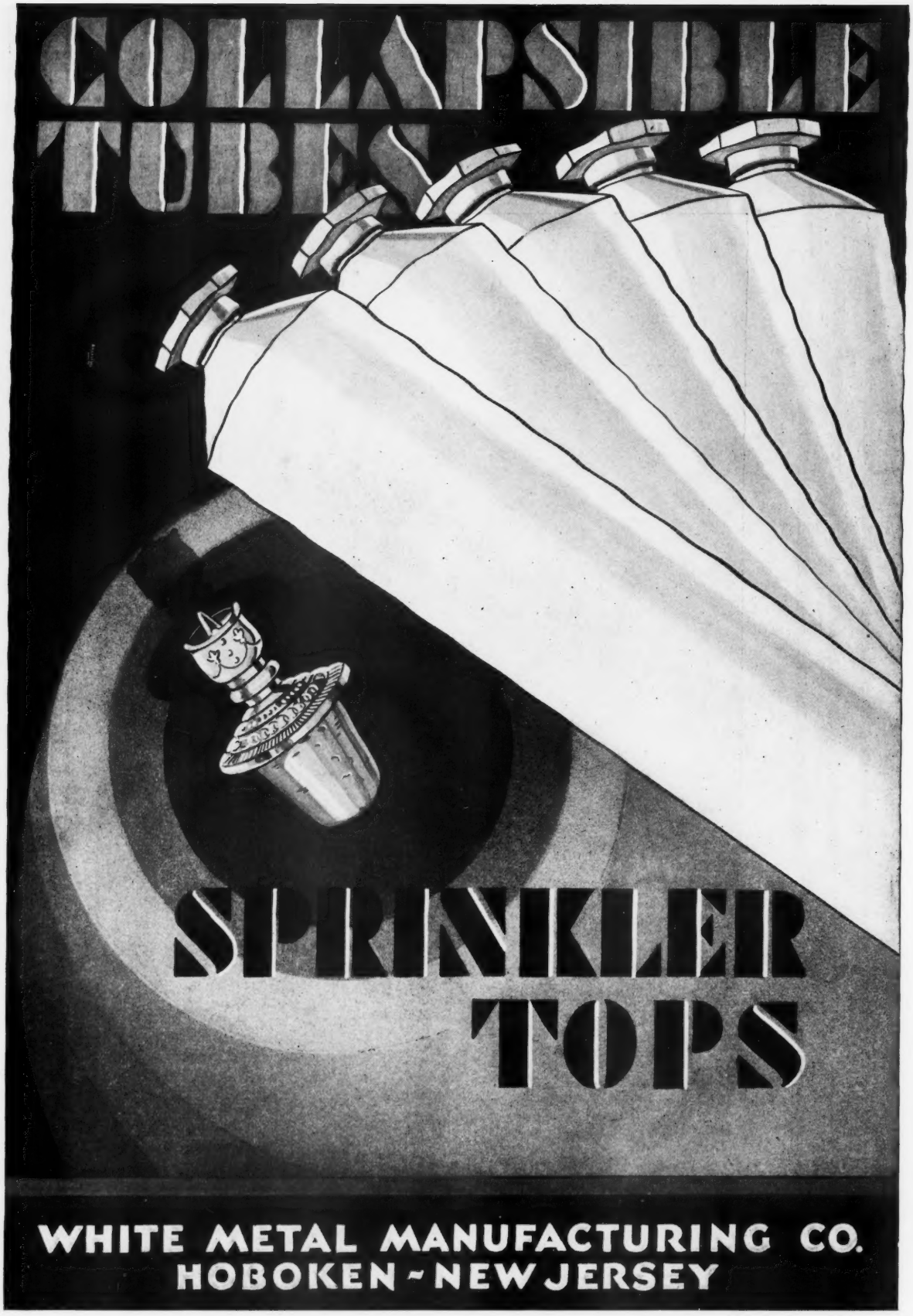
¶ We can duplicate your bottle, whether round, square, oval, oblong or panelled, in any size from ½-oz to 32-oz. and in any finish.

Let us quote on your requirements.

CARR-LOWREY GLASS COMPANY

BALTIMORE, MARYLAND

New York Sales Office:
Room 405, Liggett Building
41 East 42nd Street


COLLAPSIBLE
TUBES
SPRINKLER
TOPS
WHITE METAL MANUFACTURING CO.
HOBOKEN ~ NEW JERSEY

Down in Baltimore

THE Emerson Drug Company said "good-bye" to their sealing problems long ago when they decided to top off Bromo-Seltzer and their Aperio with the Duplex Seal.

Now, with its adoption for the smallest size Bromo-Seltzer, Duplex becomes "standard equipment" on the entire line of Emerson Drug products.

Down in Baltimore they know that the Duplex Seal builds good-will. It's so convenient—just a quarter turn of the wrist and presto, the bottle is unsealed. Just a quarter turn of the wrist and it's re-sealed to keep the merchandise air-tight. No matter how many times a bottle sealed with a Duplex is opened and then re-sealed, the product keeps its original quality until it's all used up.

Moreover, in shipment no amount of rough treatment makes the Duplex Seal "creep" or work loose. It stays firm always to protect the product it seals. There's no other seal like the Duplex Seal!

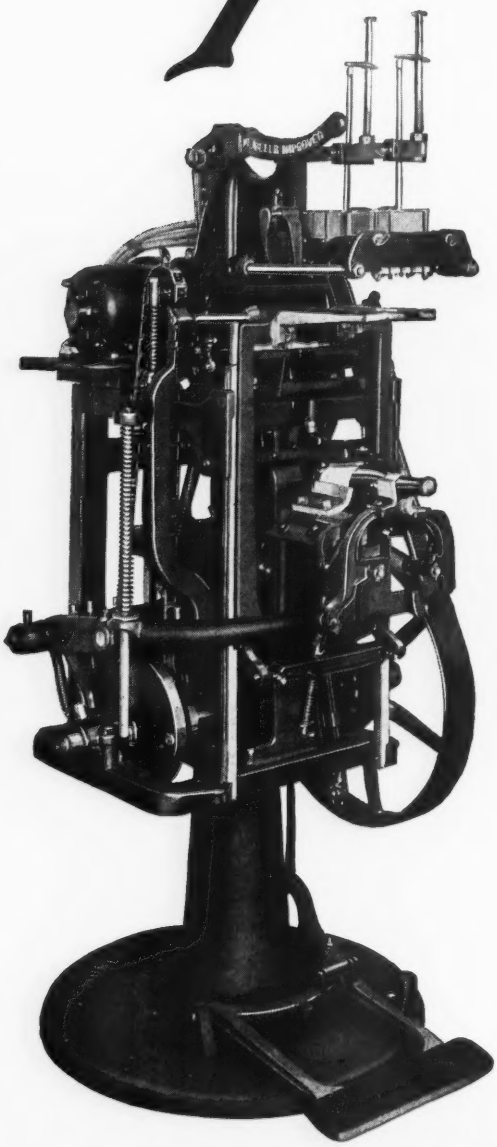
The Duplex Seal

A PERFECT SEALING & RE-SEALING CAP FOR GLASS BOTTLES, JARS & TIN CONTAINERS

NATIONAL SEAL COMPANY, INC.

Executive Offices and Works: 14th Avenue and 37th Street, Brooklyn, N. Y.
20 W. Jackson Blvd., Chicago, Ill. Newport Bldg., 68 Devonshire Street, Boston, Mass.
Pacific Coast Representatives: Morgan & Sampson—869 Folsom Street, San Francisco, Calif.
State of Kentucky Representatives: Lewis & Culp—226 North 15th Street, Louisville, Ky.
State of Texas Representatives: James Brokerage Co.—329 First National Bank Bldg., Houston, Texas
Sales Agents for British Empire and Holland: L. Lumley & Company, Ltd.—120-121 The Minories, London, E. 1, England

Improved!



THE improved WORLD LABELER satisfactorily *gums the center* of the labels as well as the edges. This is a very important feature where flat bottles are used.

SMOOTH-RUNNING because the machine has been designed with large bearing surfaces and properly balanced parts.

LONG-LIVED because made of the best materials that money can buy.

Economic Machinery Co.
Worcester, Mass.

ALEMITE HIGH PRESSURE LUBRICATION

World Labeler

Thruout the year, there has appeared in this space a series of articles about an organization styled as *Yourr* Chemical Corporation.

This organization . . . its plants, products and men; its buying, manufacturing and merchandising problems . . . is, of course, purely hypothetical.

But regardless of this, we believe you will find sufficient facts in these articles to make them interesting . . . perhaps, even helpful . . . for they have been prepared from ideas suggested by capable executives of *real* organizations.

If you have missed any of the preceding articles, or if you would like to have reprints of the entire series, address the Promotion Department, Phoenix-Hermetic Company, 2444 West Sixteenth Street, Chicago, Illinois.

Whatever your product . . . whatever your method of preparation . . . if you use glass packages, there is a PHOENIX *Metal Cap* designed for your particular sealing problem.

It is our privilege to serve some of the best known and most progressive packers of foods and manufacturers of pharmaceuticals, proprietary remedies, toilet preparations and chemicals in the United States. We could not ask for a finer recommendation as to the quality of our product or the ableness of our service.

If you would like to have complete information about PHOENIX *Metal Caps* we will promptly and cheerfully supply you with a variety of samples, data regarding their construction and use, and prices of both standard and specially decorated closures. Write, or phone, our nearest office.

PHOENIX
Metal Caps

Yourr Retailer

THE RETAILER who sells *Yourr* Products serves two broad groups of buyers: (a) Those who buy for necessary, or immediate use; (b) Those who buy for suppositional, or future use.

When a definite effort is made to increase sales it is the latter group which holds greater promise . . . altho, quite naturally, a large percentage in the latter group may be recruited from the ranks of the former.

To influence group "b" . . . to convert group "a" . . . the Retailer fills his windows with merchandise, the newspapers with seasonal ads, and the mouths of his clerks with small conversation about additional items. His entire appeal is one of suggestion.

Window trim . . . counter cards . . . display stands . . . and particularly, packages which are attractive, dependable and convenient . . . have great suggestive power. The Retailer is not slow to appreciate their advantages and make use of them.

LINERS GASKETS

THE ACTUAL SEAL of a food or chemical in a metal capped glass package is accomplished with a resilient and impervious material in the metal cap which is known as a liner, or gasket.

This liner, or gasket, is in contact with the sealed product from the time it is packaged until it is used by the consumer. Thus, it is imperative that the liner, or gasket, be made of quality raw materials and assembled in a cleanly manner . . . and it should be odorless and tasteless, or as odorless and tasteless as possible.

PHOENIX Liners and Gaskets are made of accredited raw materials and assembled under hygienic manufacturing conditions in PHOENIX plants under the direction of PHOENIX trained men. All guess work as to how a liner, or gasket, may or may not be made (the problem of the cap manufacturer who buys liners, or gaskets, from outside sources) is in this way eliminated.

PHOENIX-HERMETIC COMPANY
Metal Caps for Glass Packages
CHICAGO NEW YORK
Offices: Rochester, Philadelphia, Boston, San Francisco, Los Angeles, Cleveland, Cincinnati, St. Louis
Offices and Plants: 2444 W. Sixteenth St., Chicago, Ill.; 14th Ave. and 38th St., Brooklyn, N. Y.

. . . 10c Packages Too Must Spell Quality!

Small packages are here to stay because they fill a very definite need. They're economical, practical and always handy. They sell fast—offer a splendid and profitable means of introducing new products, widening markets and distributing channels and furthermore act as efficient missionary salesmen for their big brother and sister packages.

Like these bigger packages, 10c packages must also by their attractiveness spell q-u-a-l-i-t-y—attract and create confidence in the minds of the millions of prospects who daily visit the five and ten, drug, and tobacco stores. This quality and the value of your name must be zealously safeguarded.

Privately decorated Amerseal Caps are playing a big part in adding this quality touch to 10c packages as the above illustration testifies. They are efficiently protecting products of every kind from leakage, evaporation and deterioration. Packages sealed with them can be carried by the traveler with absolute safety—without danger of leaking—on their side or upside down. A quarter-turn removes them — another quarter-turn effectively recloses them.

Cost is an important item always—particularly in the production of low-priced packages. It's particularly interesting, then, to realize that Amerseal Caps are not only low in cost but that they can be applied from three to four times faster than continuous thread caps.

May we have a representative call and show you just how attractively, efficiently and economically you can use Amerseal Caps on your 10c packages?

A quarter turn to the right applies the Amerseal Cap. The lugs, formed to fit the contour of the glass threads, draw the cap down and effect a tight uniform contact *around the complete top edge of the container finish.*

THE AMERSEAL CAP

AMERICAN METAL CAP COMPANY

2 Summit Street **Brooklyn, New York**

Eighteen Branch Offices to Most Efficiently Serve You

Atlanta	Houston	Philadelphia
Baltimore	Los Angeles	Pittsburgh
Boston	Louisville	Rochester
Chicago	Minneapolis	St. Louis
Cleveland	Newark	San Francisco
Detroit	New York	Seattle

Are the Tubes Worthy of Your Product?

Does their appearance bespeak the "quality idea" your advertising strives so hard to convey?

Is the decorating clean-cut, sharp and in perfect register, calculated to build sales and create prestige?

Have they that durability which permits the consumer to use ***all*** the contents without waste?

Have the "minor details" such as perfect threading of cap, and tube been given careful attention?

In other words, are they the kind of tubes you'd make if you were making the tubes for your product?

If there is the least doubt in your mind about the tubes you are now using---if you are interested in collapsible tube quality---we'll be glad to supply samples and prices. ***Just address our nearest office.***

Two Big Plants to provide Better Service.

Our New London plant provides prompt service to the East while our Chicago plant makes unusual service possible in the Central and Western areas.

New England Collapsible Tube Co.

Plants: { **17-35 Waller Street, New London, Conn.**
3132-4 S. Canal Street, Chicago

New York Office: 52 Vanderbilt Avenue

NEW ENGLAND COLLAPSIBLE TUBES

Over 1500 Chemicals to Serve You

MORE than 60 years ago when the Mallinckrodt Laboratories were first organized, less than 50 chemicals were manufactured. A new firm without previous experience but with the Spirit of Service dominating every thought and action. The answers to the many questions that constantly arose were determined solely by the dictates of this spirit. An auspicious beginning for any firm to be guided only by the satisfaction of its customers.

The trade was quick to recognize the excellence of Mallinckrodt chemicals and the integrity of their makers. A reputation was built that has endured and grown brighter through these many years. To-day the Mallinckrodt Laboratories are one of the largest manufacturers of fine chemicals in the United States—a distinction that we share with the many friends who helped to make it so.

While our products and customers have increased many fold, that personal touch which guided the Spirit of Service is never lacking and we invite you to call upon us at any time. We will not disappoint you.

Mallinckrodt
Chemicals

Standard for over Half a Century

MALLINCKRODT CHEMICAL WORKS

SAINT LOUIS MONTREAL PHILADELPHIA NEW YORK

Drug Markets

Vol. XXV OCTOBER 1929 No. 4

Buying "Time"

HIGH prices for old companies that to all outward signs have passed their peaks and are in a permanent decline, seems to be the rule of the day. High prices also are being paid for companies still in their youth that have never had enough effort placed behind them to reach what might properly be called a peak. These high prices—most often placed at a figure upon which the company is not showing a reasonable return— are causing more than one business executive to wonder if the business of this country is not on a financial spree that sooner or later will result in a terrific headache.

WHY do buyers of drug and toilet preparations specialties readily offer to pay prices far in excess of the tangible assets of the companies they are purchasing ? And in many instances having paid this price, why do they immediately proceed to throw overboard almost everything ordinarily thought to make up good-will ? If a company in the drug manufacturing trade buys another company, and then rejects all existing packages, all formulas, all advertising campaigns, what has the money been paid for ? It would seem that the buyer has kept less of what he bought than he has thrown away. It would also seem that if the seller thought the price paid was high for the entire business, the buyer has paid a most exhorbitant price for what he is using.

BUT there is one thing that the buyer has bought and which he can't throw away. And this one thing he considers of far greater value than anything else among the assets of the company, tangible or otherwise. This one thing that has such a high definite value is "Time." For by buying an existing company, the purchaser desiring to enter the market for another product has placed himself in a position probably three years or more ahead of where he would be if he started from scratch. And while the buyer also saves the money that would have to be spent over this period to acquaint the trade and the public with the product, it is the time itself that this procedure would take that is of the greatest value to-day.

HOW much easier it is in these times when specialties and diversification must necessarily be secured swiftly, to buy an existing name that the trade will accept anew when active merchandising ability is placed behind it. Think what immediate response to their efforts a group of merchandisers of proven ability can obtain by buying a product that has for one reason or another lacked this merchandising ability. The fact that the price paid for a company appears high in consideration of the actual business done by the company under the old regime is no indication that the price paid does not represent the true value to the purchasers. For in these swiftly moving days, "Time" has a value probably greater than anything else that may be considered.

High Priced Co-operation

While co-operation from the various distributive agencies and retail outlets for the merchandise of drug trade manufacturers is highly desirable to those manufacturers, it seems to us that manufacturers are in a fair way to price that co-operation far above its true worth. For the extent to which manufacturers are going not only in supporting the plans and schemes of the distributive agencies, as well as inagurating plans themselves, would make it appear that the large majority are of the opinion that this co-operation is the one thing that they need to put them on the top of the heap.

Cold analysis of fact will tell the true story. And these manufacturers have only to ask themselves to what extent the retailer is of importance in creating demand. Is he as important as consumer advertising? Is he as important as detailing of physicians? Is he as important as various other ways of stimulating demand by more direct action? And is the co-operation of the large groups of wholesalers and of the large chain store organizations a good thing to pay a high price for when these distributors exist mainly through their ability to profit on the sale of their own brands?

What chance has a manufacturer of securing real promotion of the sale of his product from a store that is part of a chain with a long list of company owned products? What chance has a manufacturer of securing this same sales promotion from either a large group of wholesalers giving longer discounts to retailers to help these retailers, or from these retailers themselves who know that they must push the private brands of the wholesale group to keep it in business? By the same token what chance has a manufacturer of co-operation from a mutual wholesale organization?

Anyone who looks at the matter dispassionately must realize that there is not much real co-operation to be bought. And to involve a manufacturing company in a complicated plan or scheme that can not readily be thrown overboard seems to be a rather hazardous undertaking. For after all most of the schemes amount to nothing else than greater discounts, or in another not so pleasant way, price-cutting.

It would seem to us that if longer discounts are necessary the manufacturers can give them without the frills that are used to make them appear as something they are not. For if they were given to meet certain conditions that might prove temporary, they could be easily withdrawn. With the inauguration of a plan or scheme, the manufacturer has committed himself to something that may be entirely unnecessary within a very short space of time.

In the final analysis manufacturers must realize that they can not meet certain competition by paying a price and expecting to get the very vitals of their competitors' organizations. And these distributive agencies are competitors of the manufacturers in an increasing way. To attempt to meet the competition from distributive agencies by paying them money for something which they can not give due to their very nature, seems just a little simple minded.

Tariff and Income Tax

The action taken in the Senate by the passage of the Simmons resolution which calls for the examination of the income-tax returns of those companies seeking tariff increases, is to say the least, amusing. And the retalliation by the Republicans by asking to look at the income taxes of the importers is likewise amusing.

Especially when it involves chemical and drug concerns is such a course of procedure ridiculous. How the income-tax return of a concern making many chemical products can be made to reveal anything enlightening about one of these products, is more than we can imagine. If a chemical company shows a profit on its total operations, this does not necessarily mean that the product upon which a tariff increase is asked is being made at a profit. Likewise, if the company shows only a small profit or a loss, the product, in question may be saving the company from a still poorer showing.

The public utilities seem to have arrived at a scheme that eliminates the possibility of any such misinterpretations on the part of governmental officials. It is the practice of certain railroads to separate all their holdings into separate corporations. Thus one railroad will have a station company for one particular building; a tunnel company for one set of under the river tunnels; and more companies for almost every piece of property or equipment owned. And each of these companies, regardless of the profits or losses of the other, must show a proper return or an increase is demanded from some place. And the final place where it all comes from is the same.

Likewise our large telephone company has separately corporated subsidiaries. Of course all the subsidiaries pay their earnings largely into the holding company, but still each subsidiary company has the right to demand that it show a proper return on its invested capital. And the rates in any locality must be increased if this return is not forthcoming in that locality.

It is, perhaps, too much to ask to have the chemical manufacturers of the country organize separate corporations for each and every chemical that they manufacture. Certainly it would be an almost impossible task to carry on such a structure in the great bulk of our companies with their thousand and one items. But still it does not seem fair that these companies should not get the treatment that they can demand if they ever want to go to the trouble of such tactics. Because a hundred chemicals are made at a profit commensurate with the investment, there is no reason why several more chemicals should be made at little or no profit due to the failure of a proper readjustment of tariff rates.

We do not intend to intimate when and why tariff readjustments should be made, but we do think that this present yardstick is the wrong one to select.

A Limit to Chain Size

Of the many striking points made by Dr. Julius Klein in his discussion of chain stores, none is more full of meaning than the fact that there is a limit to the point at which bigness continues to bring increased economy. Volume purchasing can not continue to force prices down as a certain low price is reached. And when a manufacturer selling a large buyer sharpens his pencil to the last degree in order to obtain a large order, increased shading of this price is impossible even though the size of the order is multiplied many times.

At the point where sales costs mount due to increasing size, and no appreciable increases in the economies of mass buying are evident, it is quite clear that the limit of expansion has been reached, points out Dr. Klein. And it is this very fact that will set a very definite limit upon the size of various chains, unless chains of various types are under the control of one organization.

And the same factor enters into the possibilities of the probable size of groups of wholesalers, mergers of like manufacturers, or any of the other factors in the drug trade. There are bound to be limits above which further expansion brings nothing but topheaviness.

From this obvious fact that has caused some of the leading chain store organizations to retrench in their numbers of retail outlets, it becomes self-evident that the chains will either confine themselves to territories not too thickly covered by stores of the other chains, or else they will concentrate their efforts in the larger cities and leave the smaller communities for the independent retailers.

At any rate this factor controlling the size of chains seems definitely to establish the fact that the entire retail distribution of any one trade is not to be gobbled up by one or two chain organizations. It likewise seems to establish the fact that the independent retailer will exist in the small communities if the chains pick out the cities to compete in, or that he will exist everywhere if the chains decide to stay out of striking distance of one another. At any rate the independent retailer will be always with us—and in quite large numbers.

Petition for a Conference

While the drug manufacturing and merchandising trade has, due to the very nature of the trade, been one of many varying aims and purposes, there is no reason why there should not be complete harmony and co-operation between all the groups of firms that in any way enter into the trade. Yet such has never been the case. And, furthermore, the trade as a whole is becoming more disintegrated as time moves along. There is less co-operation in the manufacturing, distributing and retailing drug trades to-day than there ever was before.

Such conditions can not help but result to the detriment of the entire drug trade. If there are fueds between various groups of wholesalers, retailers, or manufacturers, the ultimate result will be a lessened consumption of drug products on the part of the public than if all these groups were working in constructive harmony. If service wholesalers are attempting to put each other out of business, or are trying to protect themselves from being put out of business, or are merely trying to help the retailer by giving away profits, the service wholesale trade as a group will not concern itself very greatly in the promotion of consumption of drug trade merchandise.

If manufacturers of one form or another try to reach the top of the market for a

specialty by giving the consumer all manner of free goods, the consumer is going to arrive at an incorrect method of evaluating the goods for which he has been paying fair prices and in the future refuse to buy any of these specialties because he will think that he is being robbed. If some manufacturers are to continue to give all manner of discounts depending upon whom they are selling while others give the same discounts to all, the retailers are going to discriminate between the manufacturers and will probably pay more attention to the terms of sale quoted than they will to the merit of the merchandise that the various manufacturers have to offer.

Drug merchandising to-day is certainly nothing but chaos. No one knows what anyone else will do to-morrow. And no one seems to care particularly unless their own sales curve reacts unfavorably. Yet, no matter whether the effects upon a manufacturer of his competitor's actions are immediate, if the competitor's actions are not economically sound, every manufacturer will suffer.

There is one way to relieve the situation, and only one. That is by having the drug trade as a whole agree on a set of fair trade practices. The most desirable way to arrive at the proper set of drug trade fair practices is by means of a conference with the Federal Trade Commission. It is time that the trade petitioned for such a conference.

The Swing to the Buyer

Conditions in many of our important drug raw materials continue to change radically, both as to the size of the demand and as to the source of supply and the price. Of prime interest to all manufacturers of drug products particularly of an antiseptic nature is the establishment of an Iodine Promotional Bureau by the Chilean iodine producers who seek to increase consumption of iodine here. At the same time that Chile seeks to promote iodine consumption due to the fact that that country has long been our sole source of supply, at least one large consumer here is in a fair way to obtain iodine at a lower price from another foreign source. Likewise the possibility of American production of iodine in a large way is reported to be only a short way off.

Another raw material that has always been a practical monopoly, but that is feeling the common revulsion against a product closely controlled and exploited too strongly in price, is bergamot oil. Although the United States continues to import and consume about the same amount of this oil year after year, the other consuming countries of the world have reduced their consumption of this oil to the point that the world consumption to-day is but little more than it was four years ago. This means that the other countries of the world have substituted a synthetic aromatic for this oil to the extent of more than fifty per cent of their requirements. Naturally the price is lower and the market is weak. Perhaps consumers of this oil will take on greater supplies now that the price is lower. But the producers must realize that if they advance the price after these consumers resume heavier consumption of the oil, the consumers will immediately withdraw from the market and leave the oil on their hands.

It indeed appears fortunate for the drug trade manufacturers that these two raw materials are coming under the control of the consuming trade rather than solely under the control of the sellers. And it is time that those in complete control of the world supply for essential raw materials appreciated the fact that sooner or later this control will be lost to them if they continue to exact a price too high in comparison with the intrinsic value of the article in question.

Ten Years Ago

(From our pages October, 1919)

With the advent of prohibition, Federal drug tax receipts in the eastern district of Wisconsin have risen from $2,554 in January to August, 1918, to $93,333 during the same period this year. This shows an increase of over 3,600 per cent., according to reports of Paul A. Hemmy, assistant collector of internal revenue.

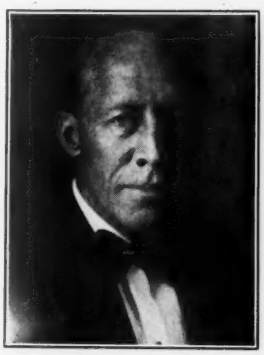
Dr. Charles T. Souther, President of the Ohio Branch of the National Pharmaceutical Service Association, says that he has received assurances that Major M. W. Ireland, General Surgeon of the Army, will give his indorsement to the Edmonds bill pending in Congress, which provides for recognition of pharmacists by the establishment of a pharmaceutical corps in the United States Army.

Monsanto Chemical Works, of St. Louis, with offices at 1 Platt st., New York, were appointed by the Government as sole selling agents to dispose of surplus phenol amounting to about 30,000,000 pounds. A representative of Monsanto expressed faith in phenol and its future.

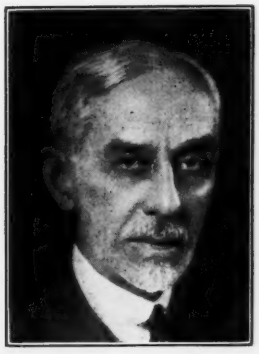
H. A. Metz has obtained an order from Judge Charles M. Hough of the United States Circuit Court requiring Francis P. Garvan, alien property custodian, to show cause why he should not be enjoined from taking over the stock of the H. A. Metz Laboratories in Brooklyn. The order is returnable on Friday, Oct. 10.

Meeting *with the* Wholesalers

The annual meeting of the N. W. D. A. held this year at French Lick continues to be the main gathering of the year of all branches of the trade, with the members of the association itself displaying greater confidence in the future.



C. Mahlon Kline
Retiring President



Lee M. Hutchins
New President

THE most striking thing about the annual meeting of the National Wholesale Druggists' Association was the lack of excitement and hysteria and the absence of the many secret meetings that were the rule rather than the exception last year. There was a feeling of security among the wholesale members present that led one to believe that these members were quite sure of their positions in the drug distribution field.

While it is true that the attendance of wholesale members present was below that of last year, this is largely accounted for by the fact that but two names from the sixty-odd McKesson & Robbins branch houses—those of Charles S. Martin of McKesson-Spurlock-Neal Company, and Karl A. Vogeler of McKesson-Vogeler Drug Company—appeared on the official roster of those present.

There was no falling off in the attendence of the manufacturers. Frank Blair was there representing the Proprietary Association and S. B. Penick representing the American Drug Manufacturers' Association. Homer Smith, president of the new Sharp & Dohme, Charles Merrell, of The Wm. S. Merrell Co. Dr. Burdick, of Abbott Laboratories, Willard Ohliger, of Frederick Stearns & Co., are only a few of the leaders among the manufacturing group present. And even these leaders were supported by various department heads from their companies.

In addition there was an extremely large attendence from the firms supplying raw materials and containers to the wholesalers and manufacturers alike. To see the list of those who would sell and seek the cooperation of the wholesale members of the association, would make one stop and wonder where all the talk of the fading importance of the service wholesalers had originated.

It is possible that certain of these leaders in the industry came to this meeting because it furnishes a common meeting ground for all the various groups of manufacturers who are separated at the meetings of their various associations. But one could not escape the fact that the N. W. D. A. is now composed of those independent wholesalers who know what they are doing, and who have few qualms about the future.

It appeared that the weaker members had taken their course and that the members who have remained independent are perfectly satisfied that they can safely steer there courses no matter what any other section of the distributing trade does.

The report of Retiring President Kline which was read the first day contained little of interest. It was brief in length and it failed to touch heavily on any important or controversial subjects. Only in his last statement did Mr. Kline touch on the differences between the various groups in the organization:

"Recently the members of our trade have been grouping themselves into classifications according to

The new president of the association is the small van-dyked, gray but vigorous Lee M. Hutchins, of Hazeltine & Perkins Drug Company, Grand Rapids, Mich. Besides being president and manager of his own company, Mr. Hutchins is a member of the Presbyterian Church; member of the directorate of the Grand Rapids National Bank; member of the Board of Education of Grand Rapids; director of the Welfare Union of the city; president of Grand Rapids Foundation; member of the Peninsula Club; Blythefield Country Club; Kent Country Club. His only hobbies are a pleasant home, a beautiful garden, and the ability to work.

The first vice-president is James M. Penland, president of the Southwestern Drug Company, which includes the merged wholesalers of Texas. Other vice-presidents are Warner James, George Van Gorder, Albert Clafin, and C. D. Smith. Members elected to the board of control are W. L. Thompson, H. D. Faxon, A. K. Mayer, Sherwood Coffin.

their views as to how present competition can best be met. I see no reason why distributors should not be perfectly free to do so and at the same time preserve an organization which shall enable them to meet together and discuss such problems as are not controversial. We have of late gotten into the habit of considering The National Wholesale Druggists' Association as an organization which shall be composed exclusively of those people who look at the distributor's problem from just one viewpoint, though at the present time, I might say, many of our old principles are being cast overboard. I am among those who believe that it is of great importance to keep this organization not only alive but vigorous and strong to face those problems which threaten us all and on which there should be no disagreement among our members, regardless of that particular form of distribution which they have adopted. Size has little to do with it. I, therefore, want to urge wholesale druggists, whether merged or unmerged, or regardless of their future plans of conducting business, to stand by the organization which has for so many years proven itself their best friend."

Secretary's Report Arouses

Secretary Newcomb, however, aroused the meeting by the reading of his report, which, in the opinion of many, was quite outspoken. His was the one address that was carried by many out of the meeting. Comment was general in the lobby that his address was well spoken.

The most striking part of Secretary Newcomb's report is contained in the following paragraphs:

"This last year has seen more changes in wholesale and manufacturing drug houses than during any other period in the history of the drug industry in this country. These changes involve the consolidation of houses in more or less well-defined geographic areas, such as in certain cities and in certain States, and also involve the consolidation of houses from coast to coast and from the gulf to Canada. There may be some who feel that these changes which have taken place create a decidedly new situation, and that the policies inaugurated for the N. W. D. A. are insufficient to meet the needs of the industry. Those who may feel this way, as well as the rest of us, should keep firmly in mind the fact that the fundamental problems confronting the drug industry have, for the most part, not been altered one iota by these superficial changes. These changes are merely attempts on the part of various groups to solve the problems in the manner that they feel is most effective. We must bear carefully in mind that some of these attempts at solution are still in the experimental stage. The solution of the major difficulties confronting the wholesale drug business will depend primarily upon better merchandising, more efficient control of operation, a better understanding of the retailer's problems and more effective co-operation with him, a clearer understanding of the manufacturer's problems and a fuller co-operation to help him reduce his own costs. If we work definitely toward these objectives we are confident that we shall see two major results:—First, more substantial gross profits, and second, lower operating costs. This, obviously, means better net profits.

Friendliness Needed

"The N. W. D. A. program should be and is designed to accomplish these ends by concentrating efforts at specific, well-defined points where those efforts are most certain to bring definite results. After these activities demand a large amount of individual, sincere, and whole-hearted effort. Everyone of them, likewise, demands our whole-hearted, collective support. There is a most urgent need for our maintaining every atom of friendliness which now prevails among our members. It is most essential that any ill-feeling or lack of friendship which may now prevail among any of our members be eliminated. This is not the time for any of us to initiate destructive policies. Warfare in an industry has always been destructive. It breeds ill-will and contempt. Harmonious co-operation is instructive. It breeds good-will and profits.

"There may be statements in this report which some members may feel should not have been made by your secretary. What I have said has been deliberately said after careful, thoughtful consideration, having in mind the welfare of the drug industry as a whole, and especially that of the service wholesaler. My own personal interests, whatever they may be, have not been considered in the least. In brief, my conclusion and plea is that every active and associate member of the N. W. D. A. strengthen his allegiance with the organization and that all work together for the solution of our common problems."

Washington Representative's Report

As usual, the report of W. L. Crounse, Washington Representative, was merely a review of the legislative activities of the year with strong hints as to what procedure should be followed by the association on those events still pending. With reference to the highly important Smoot Bill to allow the Department of Agriculture to censor advertising of drug products, Mr. Crounse said in part:

"In view of the foregoing it is obvious that the drug trade will soon be called upon to take such steps as may be deemed necessary to protect the legitimate trade against injurious legislation. It is a well known fact that there has been more or less abuse of power by officials of the Department of Agriculture under the Pure Food and Drug Law and supplemental statutes. What might happen should Congress clothe the Department of Agriculture with the right to censor all newspaper, magazine and other advertising is a serious question which demands thoughtful considera-

tion by those charged with the protection of the drug industry."

After stating that "No happening has aroused more attention throughout the drug trade than the development of the Department of Agriculture's so-called multiple seizure policy," Mr. Crounse concluded with:

Multiple Seizures Before Conference

"There is a strong feeling throughout the drug trade that something should be done in the matter of these multiple seizures. The suggestion has been heard that the National Drug Trade Conference was the proper body to take action. It now seems certain that at the coming regular session of Congress this issue will be brought to the front in connection with the movement to clothe the Department of Agriculture with authority to censor general advertising matter not attached to the package going to the consumer. The discussion of Senator Smoot's censorship bill, referred to above in this report, is likely to bring to a head all collateral issues respecting the enforcement of the Pure Food and Drug Law."

The perennial report that the Capper-Kelly Bill has made further progress was made. This bill, after being rid of the objectionable title of "Price Maintenance" bill, followed by the title "Price Integrity" bill, is now known by still another name—"Price Protection" bill.

Anti-cosmetic legislation is deemed unnecessary by Mr. Crounse due to the fact that injurious effects from cosmetics are limited to a very small part of the total business done in these products.

Among other things, Mr. Crounse dwelt at some length on the successful fight against the tariff on molasses used in alcohol manufacture; on the proposed transfer of Prohibition Bureau to the Department of Justice; on Commissioner Doran's admirable administration of his policy of allocation of alcohol production; on resumption of manufacture of medicinal whiskey; on revision of Malt Tonic Regulation; and on subjects of lesser importance.

One of the most constructive points of the meeting was contained in the address of H. J. Ostlund, of the Statistical Division of the association. This address is extracted elsewhere.

Resolutions Uninteresting

Resolutions adopted by the association were more or less to be expected and committed the association to little that is new. They included endorsement of the Capper-Kelly Bill; delegates to the National Drug Trade Conference are directed to request the conference to consider ways and means of securing more reasonable enforcement of the misbranding provisions of the Food, Drug & Insecticide Administration laws and regulations; endorsement of the Parker Public Health Service Bill providing for commissioning of pharmacists in the regular corps of the Public Health Service; endorsement of the Pharmacy Corps Bill; unqualified approval of the general policies of Dr. Doran, "who, while vigorously pursuing the law violation, has safeguarded the rights of the legitimate industries to which alcohol is an essential raw material."

Merrell Sues Crocker-Fels

The Wm. S. Merrell Co., Cincinnati, has filed suit against Croker-Fels Co., of the same city in an attempt to restrain the retailer from selling Rixo gum.

The Merrell Company, it is claimed, is the licensee under patents covering the manufacture and sale of sodium ricinoleate, a detoxifying agent incorporated in Merrell's Detoxal dental cream. It is claimed that this patent covers the use of this substance as a therapeutic agent in the oral cavities.

Rixo chewing gum has recently been placed on the market, and it is stated that the manufacturers of it claim that this gum contains this detoxifying agent.

Wine Tonics Regulated Further

A comprehensive investigation having convinced the Prohibition Commissioner that large quantities of so-called wine tonics have been diverted to beverage use a regulation has been issued increasing the solid content of such products so as to render them practically non-potable. The following is the text of the new regulation:

"In order to guard against the abuse of certain medicinal preparations, particularly a class of preparations known as wine tonics, and to prevent the use of such medicinal preparations for intoxicating beverage purposes, the following instructions are promulgated:

"All persons holding permits to manufacture wine tonics should be notified that on or after October 15, 1929, said tonics must contain not less than 30 per cent. solids irrespective of the medication contained therein. The higher solid content called for herein may be accomplished by the addition of bona fide drug material (such as sugar or glycerine) to the present approved medication in the discretion of the manufacturer.

"The present rule as to the alcoholic content and minimum drug strength, as embodied in section 1103 of regulations No. 2, will be applied as heretofore. Samples made according to revised formulae should be called for in each case.

"This matter should be brought to the attention of all concerned at as early a date as possible, in order that the modification of the formulae in question may be accomplished on all renewal permits for the year 1930."

Polk Miller Defends Mark

Heger Products Co., applicant, vs. Polk Miller Products Corp., opposer. Applicant was denied registration of the mark consisting of two paralleled bands positioned at the top and bottom of a background of yellow as a trade-mark for animal medicines.

The decision states that, "A review of the records fails to bring to light any clear and convincing evidence definitely indicating adoption and use by the applicant of its mark upon animal medicines prior to the date established by the opposer for adoption and use of an equivalent mark on goods of the same descriptive properties."

The decision further states in part: "Now, after the opposer has for many years used the mark in question on animal medicines with full knowledge of the applicant and without objection, and during this time has spent large sums of money in developing its business under said mark, to recognize in the applicant the right to the exclusive use of said mark on animal medicines, clearly would be inequitable."

{ *Chicago Happenings* }

Chicago Golf Tournament

The semi-final golf tournament of the Chicago Drug and Chemical Association was held at Euclid Hills Country Club Sept. 10th. The contestants numbered thirty and displayed, for the most part, games that have been well sharpened in preparation for the final or cup tournament, which is scheduled for October 15th, at the Medinah Athletic Club course. First, second and third prizes were won by A. C. Drury, of A. C. Drury & Co., with 89-13, net 76; Walter H. Jelly, of Walter H. Jelly & Co., with 94-18, net 76; and Harry Elwell, of Pennsylvania Oil Co., with 95-18, net 77. First guest prize was carried away by Harry Perrottet, with 84-10, net 74. Among the other guests present were Mr. Rowe, of Swift & Co., and Z. C. Shaw, of the F. C. Shaw Co., of Wichita, Kansas. Trophies were presented to the winners at the dinner that followed the day's exertions and the members found their relaxations pleasingly ministered to by some spirited recitations of poetry by F. R. Lally, of the C. A. Mosso Laboratories. It was considered that Mr. Lally should have received a prize also.

The resumption of semi-monthly meetings by the Chicago Perfumery, Soap and Extract Association on September 18th, was marked by a gratifying response to the secretary's summons. Howard Mann, Sporting Editor of the Chicago Daily News was the speaker at the opening session, and he drew from his intimate knowledge of the forthcoming world's series. At the second meeting, on October 2nd, the members were permitted to view a motion picture film which gave relentlessly accurate evidence of their exuberant behavior at the Annual Picnic last June. Word has been received that the Entertainment Committee is already hard at work on the preparations for the Annual Banquet, which will be given at the Edgewater Beach Hotel early in December.

The twenty-sixth annual convention of the National Beauty and Barbers Supply Dealers' Association was held in the Exhibition Room of the Hotel Stevens, Chicago, from September 9th to the 13th. Prominent among the exhibitors, which totaled one hundred and thirty-four, were the Colgate-Palmolive-Peet Co., Davies-Young Soap Co., Lockwood Brackett Co., The Latherizer Corporation, The F. W. Fitch Co., and Commercial Laboratories, Inc. The Entertainment Committee, headed by Bernard De Vry, kept the proceedings at a continuously lively pitch. Business programs were commenced immediately after lunch each day, and on Friday, the 13th, the election of officers took place. Charles Kahrhoff, popular head of the Denver Beauty and Barber Supply Co., was made president, to succeed W. L. Scott, who held the office during the past two years. The other officers elected were as follows: W. L. Buck, of Oklahoma City, first vice-president; J. N. Bouey, of Toronto, Canada, second vice-president; J. L. Wheatley, of Raleigh, N. C., third vice-president; Otto R. Haas, of Chicago, treasurer. Joseph Byrne, of New York City was elected to succeed himself as secretary. The executive committee of four consists of W. L. Scott, of Peoria, Ill., J. W. Wynekoop, of Washington, D. C., Max Berliner, of Seattle, Wash., and J. Fernsler, of Philadelphia, Pa.

James S. Kirk & Co. recently distributed thirty thousand samples of the new granulated, hard water soap, known as Cheerio, in Wichita, Kansas. The campaign was conducted by N. F. Rogers, Kansas representative, and J. L. Sheehan, advertising manager. Special displays have also been established in the local stores. F. T. Larson, associated with Kirk's for the past eight years, has now been made an executive on the advertising staff.

Holman Soap Co. has appointed the Pace Advertising Agency to conduct a new campaign, in which newspapers will be used.

{ *Industry's Bookshelf* }

Materia Medica and Therapeutics, by Reynolds Webb Wilcox, M.A., M.D., LL.D., D.C.L. Cloth bound, 690 pages. Published by P. Blakiston's Son & Co., Philadelphia.

A new edition (the twelfth) revised in accordance with United States Pharmacopoeia X and the National Formulary V. Besides covering the subjects described in the title, the book includes a complete coverage of pharmacy and pharmacology.

The contents of the work are best described by the author in the preface in which he says, "It is believed, this volume offers to the medical student and to the practitioner, a very complete presentation of the resources at our command, (Materia Medica); how they act (Pharmacology); and, finally, how to employ them (Therapeutics)."

Pharmaceutical Formulas, Vol. I. By S. W. Wooley, late editor, "Chemist and Druggist," London, and G. P. Forrester, editor, "Chemist and Druggist". Cloth bound, 1146 pages. Published by The Chemist and Druggist, London.

The tenth edition of this famous work which contains a comprehensive collection of official and non-official formulas selected from the British, United States and other pharmacopoecias, hospital pharmacopoecias, formularies and other works, medical as well as pharmaceutical, in use in the British Empire, the United States and other countries, together with notes on manufacturing methods and other relative information.

Volume II, which is now in the course of preparation, will contain those formulas which can not properly be classed as pharmaceutical. These will consist largely of toilet preparations.

"Vapex" Objects to "Vapure"

Thomas Kerfoot & Co., Ltd., of Bardsley, Lancashire, England, whose American representatives are E. Fougera & Co. Inc., of 41 Maiden Lane, New York, have requested an injunction that will terminate alleged unfair competition. A suit has been filed in the United States District Court of Delaware against the United Drug Co. and the Louis K. Liggett Co., it was announced here.

In their plea for an injunction, counsel for the Thomas Kerfoot Co., which manufacture "Vapex," an inhalant for relief of cold in the head, state that the United Drug and Liggett companies manufacture and sell an inhalant under the name "Vapure." Selling an inhalant with a name so similar to "Vapex," which the Kerfoot company has on the market in this country since 1922, together with other circumstances mentioned, constitutes unfair competition, it is contended.

The bill points out that "Vapex" has been continuously sold in Great Britain under that trade-mark name since 1915, and that through the Fougera Co. it has been extensively advertised and continuously sold in the United States under the same trade-mark name since 1922.

By reason of the alleged acts of the defendants, the business of the Kerfoot Co. in manufacturing and selling in the United States its preparation under its trade-mark has been seriously injured, according to the bill, and the defendant companies "are depriving the plaintiff of the benefits of his labor and expenditures and are causing him damage in excess of $100,000 exclusive of interests and costs.

The Food, Drug and Insecticide Administration of the Department of Agriculture has issued a bulletin calling attention to the fact that in the opinion of the Department chewing gum comes within the purview of the Food and Drugs Act and that many brands of gum are misbranded with respect to composition and therefore are subject to seizure anywhere outside the State in which produced.

Mergers Increase Package Changes

New owners are most apt to disregard tradition, and those owners who refuse to sell are keeping up with the moves of these more active competitors.

REDRESSING drug trade products in new containers of different outward appearance, and quite often of different shape and construction, is going on at an increasing, rather than at a diminishing rate. Modern intensive merchandising and forced distribution is causing manufacturers to give attention to the appeal and practicability of their packages. Many packages are still held almost sacred by many manufacturers who feel that if they change them they will greatly upset the trade and consumers with the result that sales will diminish rather than increase.

However, of the large number of companies changing hands in this era, the new owners often regard the package in a different light, which light has but little regard for tradition. These new owners most often have more regard for their own merchandising ability than they have for the merchandising ability of the old package. Therefore, when we see a company bought out by another company, we are most apt to see a reconsideration of the packages used, with most likely a change for the better.

Ingram's
SHAVING CREAM
Ingram's
SHAVING CREAM
With finger tip apply a little to your face. With wet brush, work up the luxurious Ingram lather. 120 shaves in this jar.
BRISTOL-MYERS CO., New York

Ingram's Shaving Cream, which formerly appeared only in a jar, now has a companion package—a tube. The design is simple and corresponds with the design of the jar.

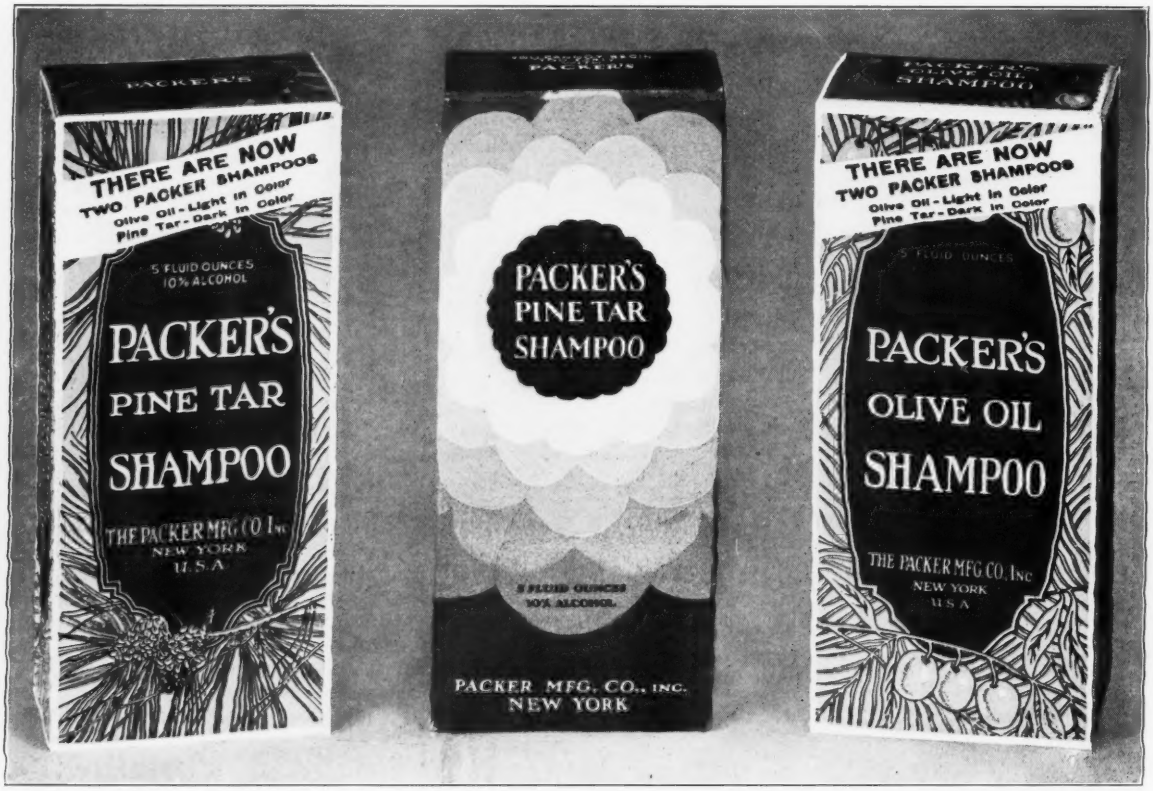
Daggett & Ramsdell packages have been completely changed by the new owners. The new tube entirely disregards any of the traditions that the old package may have possessed. Even the colors of the old package have been discarded.

As a matter of fact, the acquisition of an existing company by new hands is also calling, in many instances, for a complete reconsideration of the products marketed by the company purchased. This consideration takes into account not only the packages, but also the formulas, the advertising campaigns, the merchandising policies. Often many of these products have been sold through the years with a formula that was excellent when the product was first placed upon the market. Now other products are leading the field, leaving to these older products nothing but the thin shell of a reputation.

It is this reputation, as well as the acquaintance of the public and the trade with the name that the new owners are buying. It would take time for these new owners to establish this reputation and acquaintanceship, although, perhaps, it would cost less, or at least no more than the price paid for the company. Once bought, the new owners go to work and weigh the value of everything that exists. Their minds are absolutely open and they do not hesitate to change

anything if there is good reason to do so. They have no traditions to bind them to existing things. The only way they have of deciding is by the answer to the question, "Which will produce more business ?"

And there are those owners of products who refuse to sell to the many bidders. But these companies are as progressive as those who would buy them. They still keep an open mind with regard to all their products and are as ready and anxious to make a change, when a change is warranted, as are those who would purchase them. These owners would also change their packages, if by so doing they could improve them. The modern era of merchandising allows no one to rest upon his oars, he must keep up with the swift changes of the times.



The Packer Mfg. Co., Inc., is still keeping abreast of the times. Their latest move has been to improve the packages of their shampoos. The center package represents the design for the new packages of both products. Only the color is different.

Acquisition of Daggett & Ramsdell by Stanco, Inc., has called for the discarding of the old tube, and the introduction of a package that is the last word in moderninity. The new tube is a light gray color with black printing and a circle of silver. Moreover, it reads in a vertical position instead of in the horizontal position as was the case with the old tube. The famous red, white, and blue colors of the old package have been discarded entirely. The new package is made in four sizes and will be ready for distribution very shortly.

As was predicted shortly after the Bristol-Myers Company acquired Ingram's Shaving Cream, the product is now being marketed in a tube as well as in a jar. The tube has now made its appearance upon the market and being received by distributors enthustiastically. The tube is simple in design with a white as the basic color and printing in blue. These colors follow out the color scheme of the jar. The only printing on the tube in addition to the name of the product is the recently adopted slogan, "Never Mind Your Whiskers, Think About Your Face." Around the shoulder of the tube the words "Cool, Cool, Cool," appear. It is not the intention of the company to attempt to replace the jars. They are merely offering the two packages for the consumer to choose from. It is known that there are many who do not like the jar, and it is expected that the tube will increase the number of consumers by attracting those who have been set against the jar as a package.

The changing of the packages used for Packer's Shampoo seems to be merely a change to bring better shelf value and to instill in the minds of the consumers that the product is strictly modern in every sense of the word. The design of the two new packages now being used for the Pine Tar and the Olive Oil Shampoo are identical except in the matter of color. The Pine Tar Shampoo package carries the brown note of the old package, and the Olive Oil Shampoo the green.

High Cost of Service Wholesaling*

By H. J. Ostlund

Statistical Division of National Wholesale Druggists' Association

IT is not unlikely that a great deal of direct buying on the part of retailers has been encouraged by the fact that both manufacturers and wholesalers have failed to understand clearly their distribution costs and to get together in a way mutually beneficial. It is probable that a careful study of the situation will reveal that a large part of the merchandise now being distributed directly would go through the existing channels of wholesale distribution at a cost lower than that incurred in going direct from the manufacturer to the retailer.

The following are the composite figures of costs of service wholesalers' drug distribution:

	Per Cent
Selling	4.05
Receiving and Shipping	.47
Storage	.68
Handling	2.50
Carrying	1.39
General and Executive	3.41
Buying	.70
Billing and Pricing	.68
City Delivery	.44
Total	14.32

These percentages do not include any cash discounts on sales nor interest paid.

They do not include any charge for financing customers after the goods are sold. The charge at 6 per cent per annum for this amounts to one per cent for each sixty days. These figures do include interest at six per cent. per annum on the average inventory carried. This amounts to about one per cent. on the average. The figures that I have given have been built for one purpose only, namely to show how much it costs to sell and move drugs through service wholesalers. They have in themselves nothing to do with cash discounts or with the credit terms extended.

In going over the situation with a view to arrive at some sort of accurate distribution cost for various items, we found that there were a great many factors that brought about differences in the cost of distribution of different items.

Outstanding differences are:

1. Selling expense. It is a fact that the wholesaler does actually sell some items and that for others he merely takes orders. Usually the differences in selling effort are measured by the varying rates of commission that are paid salesmen for the sale of different items.

2. The value per hundredweight makes a difference in cost. It takes about as much effort and power to haul to and from the freight terminal a hundred pounds of a relatively low-priced chemical as it does to haul the same weight of expensive drugs or perfumes.

3. The value of the item for a given amount of space required for storage. It is clear that it costs as much per cubic foot used to store mineral water as it does to store toilet water, and yet the one space for a given turnover yields much greater sales volume than the other.

4. The rate of stock turnover. The faster the rate of turnover the less the inventory that has to be carried per dollar sales and the less therefore the storage cost and the financing and protection necessary for this inventory.

5. The extent to which an item may be sold in full case lots. It is evident that when goods are sold in the original shipping case, generally all that is necessary is that there be a shipping label stenciled on the package, while goods that are sold in broken case lots are unpacked, stocked on the shelves, picked on the orders, checked, and repacked.

6. The average unit of sale or the line extension. Two shipping cases of merchandise, the one selling

*Extracted from Mr. Ostlund's address before annual meeting of N. W. D. A.

for four dollars and the other for forty are pretty likely to require identical services and effort so far as concerns all the work done on them in the house and also so far as concerns all the bookkeeping on the sale. Yet in the one case the cost is spread over ten times the amount of sale of the other. The same situation arises in the sale of broken package lots when goods are sold in small fractions of a dozen. The effort on handling a single item is often as great or even greater than that required in handling half a dozen.

7. There are, of course, some expenses that one cannot apply directly to specific items or lines. These must be prorated in proportion to sales. In other words, the rate at which these expenses are applied is uniform on all sales. That virtually means that they are outside the range of cost accounting for these purposes. However, these expenses run only from one-fourth to one-third of the total expenses of any house. The rest of the expenses are all allocable on some reasonable basis.

8. There are also some items of expense that are special to specific items. Some of these are the repackaging of bulk merchandise, refrigeration of biologicals, humidification of tobaccos, and many others that will readily occur to any wholesale druggist. In the general costing scheme these may be ignored but the extra cost should be added specially to the specific items which should bear them.

Of the factors that bring about differences in the cost of distributing different items of merchandise some are beyond the control of the wholesaler and others may be modified to a greater or less extent by him. Among the factors over which he has no control whatever are the value per pound of the merchandise and the bulkiness of it. These are factors that are inherent in the nature of the merchandise itself. Among the factors over which it may be possible to exercise a degree of control are salesmen's compensation, stock turnover, unit of sale or line extension, and full case sale. Of these the outstanding factors are unit of sale and turnover.

Weight and Bulk Not Controllable by Wholesalers

Of base factors beyond the control of the wholesaler weight and bulkiness are of course important. How important they are can be seen by noting that the average cost for haulage of merchandise selling for about $60 per hundredweight is .47 per cent. This means that on the cheaper classes of goods even this cost becomes rather high. For instance on merchandise selling for about $10 per hundredweight the cost becomes about 2.8 per cent. However, on merchandise valued highly this element of cost becomes relatively low.

The same thing is true when the necessary space for storage is considered. Some goods are bulky on account of their shape or texture or because they do not admit of tiered or shelf storage. This includes among other things a large part of the bulk drugs and chemicals which are for the most part stored on floors and not on shelves.

The important thing about these costs, however, is that they shall not be overlooked or ignored while planning discounts and while making prices to the trade or when negotiating with manufacturers for discounts.

Influence of Stock Turnover on Cost

Turnover is the factor that is of continual interest to wholesalers and retailers alike. The proper method of arriving at stock turn is to divide the cost of sales by the average inventory. The result is the number of stock turns for the period.

Now it is evident that the greater the number of stock turns per year the less the necessary investment in stock and the less the risks and costs attendant upon such investment for each dollar of sales. The savings in expense that result from spreading up turnover are of two classes, those which result from the less space required to house the merchandise and those which result from the lower cost of financing it. The financing costs are insurance, property taxes, and interest on the investment in merchandise. This is on the assumption that the merchandise is owned and financed by the wholesaler.

We recognize full well that a critical attitude with respect to new items on the part of wholesalers will result in placing on the manufacturer of a new product an added burden for its introduction. As a matter of fact it is not a new burden to many of them who already test their markets and marketing methods thoroughly before engaging in general distribution. We know also that a good many producers whose satisfactory net profit to-day on some lines is less than the wholesaler's loss on those same lines, are going to find themselves in a precarious position.

We have been unable to evolve a logical basis for insisting that any unnecessary item should be distributed by wholesalers at a loss. None of you who have disputed our contentions have given us any. Why should the wholesale druggist be a philanthropist in bearing a needless burden that no one else can bear ? There is still another aspect to this issue. As long as wholesalers made a net profit they were contented not caring if they had also suffered a loss here and there. The fact is that the loss was made up on the products of those manufacturers who did furnish them profitable merchandise. It is not the wholesaler who is doing the real charity but rather the producer of profitably distributed merchandise who with his discounts is shouldering the costs of his competitors. Thus it seems that the unprofitable item is not alone the wholesalers' problem but also the manufacturers'.

There is another serious source of small line extensions and that is the over frequent ordering by retail druggists of merchandise that they can just as econom-

ically buy by the case or at least in full dozens. One of the causes of his difficulty is the overselling of the retailer on turnover. He has had this preached to him by every available agency that had a voice until he has started to buy from hand-to-mouth at great disadvantage to himself and at greater disadvantage to his wholesaler. As a matter of fact it is entirely unnecessary for the retailer even to think of turnover with respect to any consistently moving item. It is to his stock of slow moving items that he needs to give attention.

We have information taken from retail drug stores that shows conclusively that there is very little advantage in the way of cost reduction to a retailer in getting a turnover of more than ten or twelve times a year on an average item. On the other hand as he goes beyond that point he is likely to find himself out of stock at times and also he has to consider the extra time and effort which he must devote to buying and receiving goods instead of selling them. Any retail druggist can, by buying once a month and keeping always on hand at least a two weeks supply, get easily a stock turn of twelve times a year.

Fill-in Buying

There is still a fifth situation that is a source of considerable loss to the wholesaler. That is the many fill-in orders. Some manufacturers sell direct and then expect the jobber to fill in the odds and ends of orders or to handle the small accounts and the poor credit risks. If the wholesale druggist is going to be compelled to accept only this unprofitable business on some lines then there should be some sort of price adjustment which will bring him a profit or at least help him to meet the cost of handling this business.

This, we believe, covers the situation so far as concerns the unprofitable small line extensions of all kinds. Already the way is clearing for the improvement of this situation. Your New York office cannot accomplish anything alone. The most important factor in the development of the situation is hearty, progressive action by all members of the N. W. D. A. Once you become entirely sold on the idea of a gradual constructive recosting of some unprofitable and unnecessary methods there will be great improvement. The advantages of the service jobber, if intelligently applied, far surpass those of other forms of jobbing and in the long run are bound to prove themselves superior. The time has doubtless come when the service jobber can aggressively and conclusively proclaim his rightful place in distribution.

Unprofitable Retail Accounts

There is another approach to the problem of the high cost of wholesale drug distribution and that is the unprofitable retail drug customer. There isn't much use to talk of profitable methods of distribution so long as this merchandise must be sold to customers who buy in such a way that all business done with them is unprofitable.

What constitutes an unprofitable customer? Not small volume buying alone by any means. There are the customers far away from the center of things who are expensive to contact. These must buy in greater volume than the near-by in order to give an even break on profits. Small volume may be due to several causes. The retail store may be a small one. The retailer may scatter his purchases among several jobbers.

The orders given may be too small due to too frequent buying. When a small druggist puts in twenty to twenty-five or more orders a month his business needs looking into. If then he continues to buy exclusively in the small fractional dozens, it is evident that his business comes near to being undesirable. Add to this excessive service demanded, frequent credit memos against the account, long financing and frequent deliveries, and the account begins to look as if it needed reconstruction.

City and Country Business

There are some other facts that stand out from the data at our command. One of these is that it is of doubtful advantage to a wholesale druggist to extend his operations far afield from his home base. Salesmen's commissions and traveling expense in remote parts are high. This of course assumes that the remote territories are the home territories of competitors. We have found as much as three per cent. difference between the cost of doing business locally and in the country in the same house. How some of the remote territories or routes of individual salesmen would have shown up had we had the data is hard to tell. Some would unquestionably have shown a very unfavorable figure. This means that in a situation of this sort this house was probably doing business unprofitably to themselves. It also means that the competition they were giving certain jobbers in their home territory was costing these jobbers something extra. A frank recognition of the situation in cases such as this with an adjustment of themselves by the houses concerned to their most economical territory consistent with giving the retail trade adquate service, would naturally result in lower wholesale distribution costs with also possibly greater gross profits.

Mere Economizing Not Sufficient

We have become convinced that so far as concerns the N. W. D. A. as a whole there is not much place for a recommendation that members cut expenses. To be sure we are bound to recognize that there are points at which individual houses may do so. There have come to our attention instances of actual cases where an analysis has brought to light high costs which as a result have been considerably reduced. There are doubtless many more where such a thing

could be done. The fact is, however, that most of our members are already planning carefully, they supervise their houses closely and there is very little that an outsider can suggest in the way of operating economies.

We are, however, fully convinced that it is possible to effect very substantial economies in operation by the elimination by our membership of policies that make for high cost in favor of policies that point toward lower cost, and greater profits. It is in this direction that we feel that the brightest prospect of the wholesale druggist lies. We have come to the opinion that one of the things that the service wholesaler feels is an expense in competition with other types of distributors, and an obstacle to reduced cost is, in fact, his outstanding advantage and one which, effectively utilized, is his greatest agency for cost reduction. I refer to the traveling salesman.

Conclusions

To what specific action do the data uncovered by our survey point ? There are several spots on which attention may be concentrated.

The first is selling. It is doubtful if selling expense can be reduced by the mere reduction of salesmen's wages. Concentrated merchandising, pushing profitable lines, drives which put over staple merchandise in quantity lots thus relieving the jobber from much filling of orders for fractional dozens; all these expedients tend to reduce selling costs and at the same time reduce the handling costs by putting merchandise out in larger sales orders.

Possibly the most productive feature of salesmanship is careful market analysis. The most successful salesmanagers we know measure the sales possibilities of their territories for specific lines of merchandise very carefully and then set this measure as a quota. This is scientific sales planning. It furnishes the salesman not only an incentive but a task and a standard. He has a definite proposition to put over on his trade and this generally means more sales than a quota set by guess.

Individual houses may well study very carefully what is their most economical sphere of selling activity There is splendid opportunity for some cost reduction by the elimination of uneconomic competition. Please do not misunderstand me on this point. Allocation of territories in such a way as to eliminate competition will not be economic. Retailers will invite it if you don't furnish it, but there is some now that can be eliminated to the advantage both of wholesalers and retailers.

The second point of attack is turnover. Turnover on slow moving stock can be increased by more selective buying in some instances. In most cases any improvement in merchandise turnover can come properly only from attention to the slower moving items. There has been much cleaning up of stocks during the present year, more than ever before. Should the good work go on there is no doubt that next year's turnover figures will show up much higher than last year's.

The third point of attack is on the small line extension. On necessary proprietaries, drugs, and pharmaceuticals, very little of a constructive nature can be done save as there may be some possibility in an increased unit of sale through the co-operation of manufacturers in increasing the size of some minimum packages. This may not be practical in many cases.

Sundry merchandise that can be more readily supplied through channels other than the drug trade should be studied carefully with a view to its elimination. Such an order as for three 10 ampere fuse plugs looks as if there were something wrong with the retail druggist's idea of the proper function of a service wholesaler. If such merchandise is carried, and if there is no absolutely sound justification for doing so, steps should be taken for its elimination.

Let me say again. The crux of the whole situation is co-operation and mutual understanding and general understanding of the fundamental principles involved. A closed mind or a suspicious mind becomes a drag on progress now. So rapidly are the changes taking place in business to-day that unless the service wholesaler takes advantage of his opportunity to move in steps he is bound to be superceded by agencies who can operate more economically than he does but tragically enough less economically than he can.

F. W. D. A. Re-elects Marshall

The Federal Wholesale Druggists' Association, comprising the mutual, or co-operative, wholesaling organizations of retail druggists, concluded its fourteenth annual convention, held at Detroit, on September 25. The convention was in session three days in the Book-Cadillac Hotel, with J. H. Marshall, the president in the chair.

Mr. Marshall, in his presidential address, reviewed the activities of co-operative wholesale druggists during the past year. R. E. Lee Williamson, secretary of the association, gave a special address on "Our Obligations to the Independent Retail Druggists." The treasurer, O. J. Cloughly, reported a balance on hand of $2,545.00.

The association elected the following officers: President, J. H. Marshall, of the Northwestern Drug Co., Minneapolis; vice-president, B. O. Heath, of the Rochester Drug Co., Rochester; secretary, R. E. Lee Williamson, Baltimore; treasurer, O. J. Cloughly, of the St. Louis Wholesale Drug Co., St. Louis; members of the executive committee, J. J. Dreyer, Newark, N. J.; J. C. Krieger, Buffalo, N. Y.; F. A. Alexander, Boston. Mr. Heath and Mr. Alexander are the only new members of the official family.

More that 150 persons attended the convention. A delightful program of entertainment was presented, including a theatre party for the ladies, a stag entertainment, and the annual banquet at which the Mutual Drug Company was the host.

The Liggett Drug Co. is planning to discontinue its co-operative advertising campaign which has been conducted with the aid of manufacturers in the drug and toilet goods fields. Co-operation in window and counter display advertising, however, will be continued. That neither Liggett nor the manufacturers have been profiting by the co-operative advertising is given as the reason for the discontinuance.

Price Maintenance---

Brings Mr. Schulte's Resignation

Because of the fact that Vadsco Sales Corporation pledged co-operation to the independent retailer, Mr. Schulte is forced to resign as chairman of the board since he is also heading a chain of stores that will sell these products at cut prices.

ONE manufacturing company in the drug trade has been forced to buy out the chairman of its board and remove him from contact with the company as the result of the differences of opinion regarding cut prices. The announcement has been made that David A. Schulte is no longer chairman of the board of Vadsco Sales Corporation, and that his holdings have been bought by Jules S. Bache, chairman of the executive committee of the corporation, and Thomas J. McHugh, president of the corporation.

The reason given is that Mr. Schulte's connection with the company became "untenable" due to conflict with other of his interests. Going on to explain just what this means, the announcement to retailers says:

"As you are aware, our policy is not to engage in the retail business, and to give our customers every possible protection within the law. D. A. Schulte, chairman of our board of directors, is president of Schulte-United, which sell toilet articles and proprietaries at cut prices. This compelled us to call Mr. Schulte's attention to the fact that the sales policy of his company was contrary to the policy of most of Vadsco customers, and that either the Schulte-United must discontinue its practices or else he should retire from our company. After looking into the situation Mr. Schulte advised us that the Schulte-United could not change its policy.

"As a result of these discussions, J. S. Bache, chairman of our executive committee, and myself have acquired the entire interests of Mr. Schulte and his associates, who have resigned from our board of directors and have severed all connections with our company. We assure you that neither the Schulte-United nor other Schulte companies or interests are now in any way connected with our company."

It will be remembered that Mr. Schulte took an unusually keen interest in the future of the independent drug retailer a little over a year ago when he entered into an agreement with the members of the Greater Newark Retail Druggists' Association in which he agreed to give to the association ten per cent. of the purchases of his products by the members of the association. It will be remembered that at that time George I. Schreiber, secretary of the association published an article telling of this agreement and how his suspicions of just what Mr. Schulte was going to do in the drug trade had been allayed by his interview with Mr. Schulte.

Furthermore, Mr. Schreiber stated, the discounts on Mr. Schulte's goods were to be 33⅓ and 10% direct to the retailer. And Mr. McHugh assured Mr. Schreiber that they would do everything legally possible to prevent price-cutting.

At that time, Mr. Schreiber stated that he had Mr. Schulte's assurance that he would not enter the retail drug trade. In fact, Mr. Schreiber quoted Mr. Schulte as saying:

"Schreiber, if I wanted to go into the retail drug business I don't have to go at it in an underhand way, or through the back entrance. I can go into it right through the front door, and I could have been in it long before this because there are very many opportunities offered me to do so."

After explaining in detail just what the opportunities had been, Mr. Schreiber says that Mr. Schulte continued with the "significant statement:"

"A retail drug business in this country at the present time is not what I call a profitable business compared to other interests I am associated with, so it holds no interest for me whatsoever. The only ones in the drug business who are making any real money are the manufacturers."

But Mr. Schulte has not gone into the retail drug business as such. Rather is he president of a chain of stores that will handle proprietary medicines and toilet goods among a great many other lines that are not handled by drug stores. But it is a fact that these stores will compete in these lines with the retail drug stores of the country, and in that order to compete according to the chain store idea, prices will not be maintained. Evidently there has been some reaction from somewhere as to the compatibility of these conflicting interests.

The fact that the Vadsco Sales Corporation—owners of A. D. S., Vivaudou, Melba, and Kny-Scheerer—have allied themselves with the independent retailer in preference to the chain stores has brought about the present situation. It will also be remembered that Vadsco recently inaugurated a policy of selling direct to these independent retailers instead of operating through jobbers. This change of policy caused the net earnings of the company to drop from $1,012,192 in 1927, to $355,704 in 1928. However, for the first six months of this year the financial report of the company showed a profit of $805,725, or at the rate of $1,611,450 per annum.

Either the policy of giving additional discounts to help the retail associations or the policy of selling direct, or perhaps both, have been responsible for the rapid recovery of Vadsco Sales. That the company is going to do everything possible to maintain the friendly interest of the retail druggist and let nothing harm this profitable relationship is evidenced by this latest very drastic step. Evidently Vadsco Sales feels that it is not in a position, as some other manufacturers are, to have any direct or even indirect affiliation with retail outlets, especially those retail outlets that sell at cut prices.

Mr. Schulte is evidently satisfied to cast his lot with retail outlets. It was announced at the time of Mr. Schulte's resignation from Vadsco Sales, that Mr. Schulte had acquired the holdings of the Whelan interests and of the United Cigar Stores interests in the Schulte-United retail chain. This is said to have involved several millions of dollars.

Iodine Educational Bureau Opens

A new organization known as the Iodine Educational Bureau has opened offices at 64 Water st., New York, and will co-operate at all times with other organizations engaged in research work on the application of iodine in agriculture. J. J. Nichols is the director of the Bureau which is supported by the Iodine Producers' Association of Chile, South America.

The Bureau will collect and disseminate dependable information about iodine and iodine compounds. A considerable amount of research work will be undertaken, a fellowship having already been established at Mellon Institute for this purpose and several other fellowships being now in process of establishment at other institutions to follow up special lines of research investigation.

The activities of the Bureau will supplement those of all other individuals or research units now doing work on the usage of iodine not only in agriculture but in industry, animal husbandry, and in the professions of medicine, dentistry, pharmacy and veterinary medicine.

Blumauer-Frank Drug Co., wholesaler, Portland, will establish a sales office and display room in Seattle and a fully equipped wholesale house in Spokane. The Seattle branch will be opened about the middle of October and it is expected that the Spokane house will be ready for business about February 1. This is in order to carry out a plant for expansion designed to enable it better to serve the retail drug trade of the Pacific Northwest.

McKesson & Robbins, Inc., Maryland Corporation through its Chicago subsidiary, Fuller, Morrison & Co., is negotiating to acquire Hartz & Bahnsen wholesale drug firm of Rock Island, Ill., and the Henry Dart's Sons Wholesale Grocery Co. building.

Power of Attorney Chain Seeks Co-operative Advertising

The power of attorney type of chain stores that was announced last February in Northern New Jersey under the leadership of George I. Schreiber, secretary of the Greater Newark Retail Druggists' Association is expected to be placed in active operation shortly under the name Consolidated Drug Stores, according to a letter mailed to drug manufacturers and signed by Mr. Schreiber.

The letter reads as follows:

"We will soon be ready to announce to the public the formation of the most unique chain of drug stores in the country.

"This consolidation is the result of 540 druggists giving a POWER OF ATTORNEY over their stores to the writer, fortified by a bond of $1,000 received from the owner of each store to insure faithful performance of our policies.

"This new chain will be known as 'C.D.S.' Drug Stores, and will be identified by the enclosed symbol placed conspicuously on the outside of each store, on the windows, wrapping paper, signs, price tickets, etc.

"The 'C.D.S.' Drug Stores will advertise special prices once a week in the three principal evening papers in this territory, 'Newark News,' 'Patterson News,' 'Hudson Observer.'

"Part of this space is being reserved for manufacturers co-operating with the 'C.D.S.' Drug Stores.

"In return for this co-operation we GUARANTEE to conspicuously display your products in our windows in accordance with the following schedule.

3 Inch Space	*No. of Displays*	*Price*
13 insertions	500	$ 468
26 insertions	1,250	936
39 insertions	2,000	1,404
52 insertions	2,750	1,872

"This schedule can be made as flexible as you wish to meet your requirements.

"It is our earnest desire to work wholeheartedly with the manufacturers and there are good and substantial reasons why WE can give you the kind of dealer co-operation you have often wished for but never yet been able to obtain.

"We are not your Competitors as we have no brands of our own.

"Our stores are not managed by disinterested clerks.

"Each manager is the owner who has a financial interest to safeguard and protect.

"Enclosed are contracts for this co-operative advertising which we would appreciate if you will sign and return as quickly as possible. If further details are desired, please let me know at once."

Chemical Salesmen Golf

Fall Golf Tournament of Salesmen's Association of American Chemical Industry held Oct. 1, at Lenox Hills Golf Club, Farmingdale, L. I. was won by Al Alvarez, Grasselli Chemical Co., who posted a low gross score of 86, followed by Grant A. Dorland, MacNair-Dorland Co., with 94, and Victor A. Williams, Monsanto Chemical Works and new president of the association, with 98.

Class A net scores were won by Mr. Ullrich, Passaic Color Co., with 100-26-74; A. J. Higgins, of Zinnsser, net 75, and R. J. Grant, Noil Color & Chemical Co., net 78. Class B (gentlemen with handicaps of 30 or more) prizes were won by William Adkins, Givaudan-Delawanna, net 66; Wayne Dorland, MacNair-Dorland Co., net 76; and C. Oscar Lind, Dow Chemical Co., net 79.

Kickers' handicap first was taken by Elmer Sheets, of "Chemical Markets," who won from Mr. Shattuck, Abbott Laboratories by a toss of a coin. Third prize was taken by Stephen Urban, E. R. Squibb & Sons.

CHAIN STORE LIMITS

At a certain point, expansion is not accompanied by economies, states Dr. Klein, who thinks that ideas of 100% monopoly of retail operations by chains are "decidedly fantastic"

By Dr. Julius Klein
Assistant Secretary of Commerce

IT is a commonplace of modern economic history that any sudden change in the functioning of industry or commerce has immediately brought about inevitable confusion and alarm. The household wool weavers of Eighteenth Century England burned the first looms which they viewed as destructive menaces to the future of their home handicraft. And so to-day one hears from many quarters the more or less panicky cry that the chain store must be, if not destroyed, at least drastically curtailed. "There ought to be a law"—that perennial battle-cry—to exterminate this latest threat to the economic tranquility of the Nation.

Certain Malpractices in Trade Admitted

Admittedly there have been occasional provocations for this hostility. Certainly there is no excuse for illegal trade restraint, for marketing malpractices, for vicious rebates; and wherever such offenses's develop, the instruments of the law should be promptly and vigorously applied.

Such steps are particularly necessary if this malevolence takes the form of illicit antagonism against the independents, whose indispensable value to the consumer and to the distributive system of the Nation has been repeatedly recognized by responsible authorities. But these instances certainly do not afford any basis for the clamor for the destruction or restraint of the entire system of scheme of multiple distribution.

The battle-cry of "down with the chain store" seems about as reasonable to the casual bystander as a campaign for the prohibition of all beefsteaks because of some indestructible specimens encountered at wayside lunchrooms last Summer. As was recently pointed out, there is just as much variety among chains—not simply in the lines but in methods, efficiency, and above all, in commercial integrity—as there is among independents.

Chains are not automatons, all stamped out by some huge mill. They are conceived and operated by human beings whose frailties, aspirations, and merits are much like those of the rest of us. Chains are not invulnerable and they are by no means infallible.

The chain, after all, is by no means a novelty. Indeed, this year marks the seventieth anniversary of the chain idea in this country. It would seem strange, therefore, that so much uproar should be caused by such a venerable patriarch in our business family. The ravages of the fever of "flaming youth" of to-day have certainly gone far if they have so completely permeated this quite mature institution, so as to make it at this late date a wholly dangerous element.

Principle of System is Old to Industry

The simple truth is, of course, that this factor in distribution, like so many others in our entire economic and social fabric, has felt the univseral quickening of the tempo of our national life. It has not changed its fundamental characteristics in any vital particular. The basic principles and practices of the chain are still pretty much what they were some years ago. It is simply that this unit in our business life has inevitably responded to the new demand for speeding up of distribution, for the elimination of wasteful practices, for the simplification of the processes of bringing things from their sources to their consumers.

With every such rapid change there are inevitable irregularities, ever-present unscrupulous opportunists

eager to capitalize every chance for a swift speculative turn of fortune, with no thought for the permanent good of the institution which they are utilizing for their temporary purposes.

Consequently it is to be expected that we find the chains denounced on the one hand as great, clanking, fire-breathing monsters and on the other as shining symbols of the new era in business, as universal panaceas and complete solutions of all the ills of our distributive system. The uproarious warfare between these contending camps would seem to afford an admirable opportunity for a crusade in domestic disarmament.

For obvious reasons, I do not propose to venture into that dangerous zone of fire between these belligerents—a no man's land torn with explosive legal issues and with much irrelevant acrimony. I leave these contentions issues to the belligerent protagonists, who are far better equipped than I to juggle with them. The chain is quite evidently here to stay. At least it would seem to be rather late, after some 70 years, to intimate that it is an unwelcome guest in our business community, though admittedly it, like other institutions in our business community, is still far from perfect.

If we scrutinize the reasons for the distress of the independent retailer, we find, as I endeavored to point out on a recent occasion, that, contrary to the general impression, his difficulties in so far as he is in trouble (and there are thousands who emphatically are quite prosperous) are due not so much to the competitive threats of that phalanx of carnivorous dragons led by the chain stores, the mail order establishments, and the house-to-house solicitors, but almost entirely to the incompetence of his own operation.

Repeated analyses of failures and near-failures among retailers in all parts of the country bring out the fact that considerably less than 5 per cent. of the failures among independents last year were due to competition. On the other hand, incompetence is responsible for anywhere from 32 to 80 per cent. of the casualties in their ranks, dependent upon the locality and the trades involved.

Examination of Operations Advocated

It would seem, therefore, to be decidedly helpful in our consideration of the status of the chain, instead of "pointing with pride" or "viewing with alarm" its innumerable relations with other types of distributors, to indulge in a little penetrative introspection. Certainly an examination of the weakness of this institution might suggest correctives that will enable it to render an even more helpful and constructive service to the Nation.

In connection with the independents, the basic question was: "In so far as they are losing, is it due to the fact that they are independent, or that they are not properly conducted ?" The answer to that has already been indicated above.

Conversely, if the chains are successful, is it because they are chains or that they are better managed ? Isn't the fundamental issue in our whole distributive situation not the conflict of this or that function with the rest, not the struggle between wholesaler and jobber, between independent and chain, but rather the merciless campaign for the curtailment of slipshod selling ?

An outstanding characteristic of the discussion of chain distribution is the constant stressing of the importance of volume. We are told that the secrets of its success is quantity purchasing, that because of large-scale operations chains are able to engage high-powdered advertising experts, specialists in display and in store location, and in other ways to indulge in overhead "experting" of a sort quite out of the reach of the small distributor.

Periodically, we are bombarded with statistics by salesmen of chain-store securities, by numerous clever ambidextrous digit-jugglers eager to bewilder their gasping audiences with rapid-fire displays intended to convey an impression of the overwhelming growth capacities, operations, and so forth, of this or that chain monstrosity.

Size is Not Criterion of Profits of Concern

Now this "mass mania" all too frequently leads to the assumption that the greater the volume or size of the given chain, the more sure is its success. As a matter of fact, there is no necessary correlation whatsoever between mere bigness and prosperity, any more than there is between bigness and wickedness.

Both virtue and vice seem to come in small "packages" just about as frequently as in large ones. This truth has been emphasized and demonstrated over and over again. But, it still seems to require reiteration in connection with this problem of multiple distribution. Indeed, one of the largest and most successful chain organizations is understood to have reduced its system by many hundred stores during the past two years, with a resultant gratifying increase in net profits.

Every so often some smugly satisfied chain official grows a bit arrogant and cocksure—and most of us probably would under similar circumstances—and non-chalantly observes that its volume puts his organization pretty much in a class by itself. To him it begins to take on a definite prospect of immortality because of its prodigious proportions.

That is the time when it is most important for him to bear in mind that there are dozens of perils in distributive operations and practices which even the biggest cannot afford to ignore. He might even be discreetly reminded of that rather plain, but all too often accurate, axiom from a certain realm of sport that "the bigger they are, the easier they are to hit—and the harder they fall."

It would, therefore, seem the better part of wisdom—to say nothing of fairness to the general public—

for those who stress the rapidly-expanding totals of business done by this or that chain to present also the details as to how much of that expansion is due to the acquisition of new units and how much of it represents an actual increase in the business done per store. Some such picture of the ratio of increasing business, of prosperity—or the reverse—per store would be of special interest to the consumer.

It is well recognized by distribution experts that mere volume in gross operations often means excessive increases in costs of such expansion. No chain—metal or otherwise—is stronger than its weakest link, and when multiple distribution by any given organization reaches that point in its expansion beyond which sales costs mount up on the one hand and no appreciable increases in the economies of mass buying are evident on the other, it is quite clear that the limit of expansion has been reached.

Curtailment of Volume Often Increases Profit

The present would seem to be a most opportune moment to check up on precisely this situation, before any prolonged speculative fervor crystallizes into the jubilant conviction among chain enthusiasts that "the sky is the limit." Investigators of the Department of Commerce have come upon one instance after another where drastic curtailments of gross operations have resulted in increases in net profits.

The roar of volume operations is by no means the "theme song" of prosperity in any industry or any trade. The vital, indispensable note is the subdued "Thank you" of the receiving teller as he received those crucial week-end deposits for entry in his fateful ledgers.

In other words, there have been many instances of bankrupt chains, regardless of their impressive proportions. The admitted economies secured through mass specialized buying may easily be vitiated, because this very concentration of purchasing may often hamper the ability of the organization to take fullest possible advantage of small, widely scattered but profitable opportunities to buy.

In fact, mere size inevitably tends toward inflexibility to a certain immobility impairing quick adjustment so as to capitalize quickly those unexpected but often vital local advantages in trade so easily overlooked by distant "headquarters."

Then, too, there is, of course, that persistent problem of inadequately trained personnel. Chains are by no means exempt from that inevitable, increasing conservatism which develops among the ranks of executives and managers from prolonged "inbreeding," from the failure to bring in fresh independent thinking.

The threat of this infirmity should ever be in the thought of the higher executives of even the largest chain. It has been repeatedly demonstrated in the business history of recent years that by its very size an organization is often doomed to inertia, to a building up of its personnel entirely from within its ranks. Although this makes for a valuable esprit de corps, it also implies very frequently an ultimate loss of contact with what is going on in the outside consumer and competitor world.

Certainly a major line of improvement, which must be undertaken by the chains if they are to continue to progress, is in the vital consideration of better personnel training. The consumer will assuredly not tolerate anything in the way of impersonal arrogance or incompetence in the sales force of any establishment, no matter how awe-inspiring its size. Good manners are always good business, most especially in the case of those who are conspicuous, who pride themselves upon their "national" proportions.

But amidst all this clamor, let there be no mistake about the admitted contributions of the chain toward the betterment of distribution in general. Within the past decade the chain has unquestionably introduced us to new methods of waste elimination in that field of our business endeavor which is most in need of just such improvement. The chains have evolved new methods of stock control, of merchandising display, of cost accounting, of weeding out unprofitable items—in a word, of watching many of those details which so frequently spell disaster for the unwary tradesman.

Prediction as to the outlook for the chain is, of course, both precarious and difficult. Many types and phases of these outlets seem to have reached the peak of their possibilities and it is not unlikely that the future will bring about their more intensive, rather than extensive, development.

In this salutary work every forward-looking chain executive appreciates the fact that he can learn much from his shrewd independent competitors. And there are many of these. Every community boasts one or more who are quite able to take care of themselves as against any chain competition. Their neighborhood is usually given a wide berth by the wise chain manager.

The progress being made by independents through group buying and other variations of joint functioning would seem to indicate that any claims of an early 100 per cent. monopoly of retailing by chain operations are decidedly fantastic. Doubtless the 15 per cent. of our total retail traffic now being handled by chains will increase, but it would seem that this growth will be in conformity with that of the general level of prosperity of the country, rather than in any sensational advances such as those of the recent past.

Throughout this discussion of the rivalries of different factors in distribution, it cannot be too frequently stressed that in the interests of the consumer—and there is no more implacable and invincible foe to any type of distributor, great or small, than an embattled, antagonistic customer—it is obviously indispensable that every possible economy be achieved, and economy, like charity, begins at home.

{ Patents Issued }

UNITED STATES PATENTS

Soap Flakes

Soap flakes are made from a soap solution in water, the percentage of the latter being less than 15%. An alkaline persalt and an oxy compound of a hydrocarbon of the general formula, C_nH_{2n}, wherein is more than nine, are incorporated with the solution. E. Flammer and C. Kelber, Heilbronn, Germany. U. S. Patent No. 1,717,553, filed Nov. 16, 1925.

New Dialkylamino Alkyl Derivatives of 3:6-Dihydroxyacrixdine

These products are oils or products of low melting point. They are difficultly soluble in water, easily soluble in ether, alcohol or benzene. They form yellow hygroscopic salts with mineral acids and possess excellent properties against blood parasites. F. Mietzsch, Elberfeld, Germany, assignor, Winthrop Chemical Co., Inc., New York. U. S. Patent No. 1,727,480, filed June 30, 1927.

Complex Metal Compound of Pyrocatechin

A series of compounds of this nature are formed and possess valuable therapeutic properties. The pyrocatechin is substituted by at least one solubilizing acid group, containing a heavy metal (other than antimony) in a complex form. The products are soluble in water with a neutral reaction. H. Schmidt, Vohwinkel, Germany, assignor, Winthrop Chemical Co., New York. U. S. Patent No. 1,718,492, filed April 30, 1927.

Complex Metal Compound of Pyrogallol Sulphonic Acid

A new complex organic metallic compound is formed by causing a compound of a metal other than the alkali metals to react with a pyrogallol sulphonic acid compound. H. Schmidt, Vohwinkel, Germany, assignor, Winthrop Chemical Co. U. S. Patent No. 1,718,493, filed April 30, 1927.

Alkaloidal Salts

Mixed solaneae alkaloid salts of polybasic acids are made by preparing a solution of equimolecular quantities of two different solaneae alkaloids and of a polybasic acid in a volatile solvent. The solvent is then allowed to evaporate at a low temperature. W. Scholler, Berlin-Westend and H. Schotte, Berlin-Wilmersdorf, Germany, assignors, Chemische Fabrik Auf Actien vormals E. Schering, Berlin, Germany. U. S. Patent No. 1,717,585, filed June 20, 1927.

Extracting Theobromine from Natural Products

The ground material to be extracted is intimately mixed with an alkaline earth metal hydroxide in large excess with relation to the theobromine content of the material. While the mixture is being continuously stirred, there is gradually added such a quantity of water that the mixture apparently maintains its dry condition. Then on further stirring a further quantity of water is added such that the total quantity of water amounts to four times the weight of the theobromine containing material under treatment. Then the mixture is subjected to filtering, and the solution of the metal salt of the theobromine is finally treated in the usual manner in precipitating a substance dissolved in an alkali. Pure theobromine is obtained in this manner. G. C. A. van Dorp, Katwijk, a-Zee, Netherlands, assignor, Naamlooze Vennootschap Societeit voor Chemische Industrie "Katwijk". U. S. Patent No. 1,718,093, filed March 15, 1928.

Medical Serum

Animal protective and curative sera are purified in the following manner. The sera are treated with an excess of a sulphate. This salts out and precipitates the globulines. The precipitate is tested with water and with barium acetate, which results in the precipitation of barium sulphate. The latter is separated from the globuline solution. This solution is then submitted to electro-osmosis. The treatment is continued until at the isoelectric point of 6.4pH concentration of hydrogen ions the euglobluines have become deposited. This deposit is separated from the aqueous solution of pseudoglobuline. L. Feges and B. Boettcher, Berlin, Germany, assignors, Elektro-Osmose A. G. (Graf Schwerin Gesellschaft), Berlin, Germany. U. S. Patent No. 1,718,282, filed Feb. 16, 1927.

Ampul

The ampul is provided with an internal drum and is connected with an independent ampul which has a vehicle for the drug. Both of the ampules are hermetically sealed with respect to each other and the outside atmosphere. Independent means connect the two ampules and provide a passageway for the vehicle, whereby the drug, that is the contents of the vehicle, may be conveyed to the drug ampul when the seals between the ampules and the connecting means are broken. The seal with respect to the outside atmosphere remains intact. A. E. Smith, Los Angeles, Calif. U. S. Patent No. 1,718,593, filed Feb. 12, 1927.

Detecting and Correcting Mouth Acidity

Means for detecting acidity in the mouth consist of a dry salt which is soluble in water. This salt contains phenolphthalein and Congo red in approximately the proportions of eight grains of the phenolphthalein to three grains of the Congo red. J. P. McCall, Larchmont, N. Y., assignor, Calsodent Co. Inc., New York. U. S. Patent No. 1,717,723, filed April 9, 1927.

Menthol

Menthol is made by acting on a methyl-isopropylene-phenol at a temperature between 100 to 200°C. in the presence of a normal hydrogenation catalyst. Hydrogen is the reagent and is allowed to act on the phenol until eight hydrogen atoms have entered into combination. W. Schoeller, Berlin-Westend and H. Jordan, Berlin-Steiglitz, Germany, assignors, Chemische Fabrik auf Actien, vormals E. Schering, Berlin, Germany. U. S. Patent No. 1,718,666, filed June 20, 1927.

BRITISH PATENTS

Alkyl Phenols

Alkyl phenols are prepared by the treatment of dioxdiphenylmethane and its derivatives with hydrogen diluted with an inert gas or vapor, for example nitrogen or steam, in the presence of a hydrogenation product. Higher temperatures may then be employed with consequent increase in reaction velocity, but without the occurrence of nuclear hydrogenation. The catalytic materials may be employed in the form of their precipitated carbonates and hydroxides, which then become converted into the active form in the autoclave. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 309,865, filed August 15, 1929.

Synthetic Perfumes

By heating butadiene and its homologues under pressure and at elevated temperature (advantageously 150 to 200°C.) with acrolein and its homologues, cyclohexene aldehyde and its homologues are obtained. Replacement of the acrolein component by acrylic and homologous acids or their esters gives rise to the corresponding acetylenic carboxylic acids or esters. Again by substituting the corresponding acetylenic aldehydes, acids or esters for the above-mentioned olefinic aldehydes, acids or esters, there are obtained cyclohexadiene aldehydes, carboxylic acids and esters. In most of the condensations, the formation of two isomeric products occurs, the separation of which is effected by converting the less sterically-hindered isomer into a bisulphite or semicarbazide if an aldehyde or into an ester if an acid. Stereoisomers can be similarly separated. The products are useful as perfumes or in the manufacture of perfumes. Societe Anonyme M. Naef et Cie., Geneva, Switzerland. B. P. No. 309,911, filed April 11, 1929.

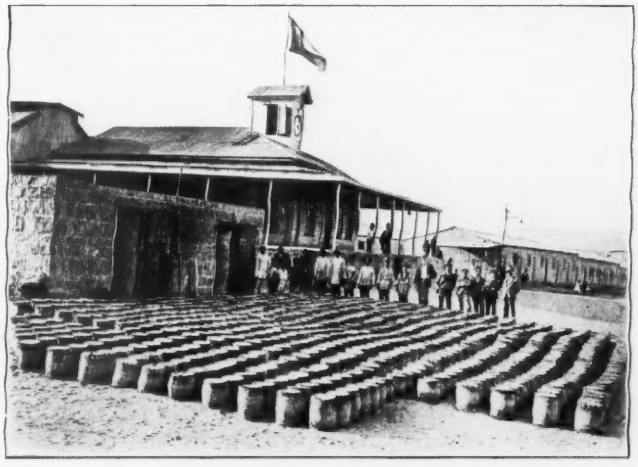
(Continued on page 351)

Basic Developments in Market *for* IODINE

WHILE there has been no surface change in the market for iodine, plans that are now afoot may completely change the position of the market for crude iodine as regards the sources of supply before another year has passed.

In the first place it must be realized that to-day this country is drawing all of its crude iodine from one source—Chile. In that country, iodine is secured as a by-product of the production of nitrate of soda. There is so much iodine available in the crude nitrate of soda, that only a very small proportion of it is recovered to meet the demands of those countries who obtain their iodine from this source.

The extent of the profit realized by the Chilean producers of iodine must be properly appreciated in view of the threat of supplies from other sources. Suffice it is to say that in addition to an export tax in Chile on iodine, the producers are so satisfied with their profit at present quotations that these same prices have been in effect since long before the war, and never even increased during the war days when practically everything was at a premium. Therefore, it would seem likely that the Chilean producers could readily cut their large margin of profit and sell iodine at considerably lower prices if conditions ever made such a step necessary.



View of the Strong Room at Oficina Paposo, Chile, with kegs of *iodine waiting to be placed in safe keeping until time of shipment*

But other sources of supply threaten the Chilean monopoly. The first of these is Java. In this country there is available iodine in the form of copper iodide. Recently a large drug manufacturer who is a large consumer of iodine desired to have the duty on cuprous iodide removed so as to allow them to import this product from Java and convert it into iodine or potassium iodide. While the possibility of this source of supply of iodine being utilized was thought to have passed into history, the fact that cuprous iodide has been placed on the free list in the proposed tariff bill as well as the fact that much is heard in the trade of this manufacturer going ahead with his original plans, that the possibility of Java supplying iodine to this country has been very much revived.

Another source that promises much is the recovery of iodine from the brine wells of the oil producing regions. In certain territories of the West, notably Sand Springs, Colorado, the wells that gush forth the valuable crude petroleum, either at the same time, or after the oil has ceased to flow, gush forth brine quite rich in iodine content. The recovery of this iodine is planned by an American company.

This scheme of securing iodine is not new. In fact it has been tried in Russia and is now said to be in operation there. Also Italy secures its iodine from a similar source, and a high protective tariff is now making Italy totally independent of outside sources of iodine.

With these two sources of iodine about to come into being, it is rather ironical that the Association of Iodine Producers in Chile should inagurate an Iodine Educational Bureau in this country designed to increase the consumption of iodine in this country. There is also another fact that makes the opening of the bureau rather amusing, but that can best be gleaned from a glance at the import figures for iodine during recent years.

Imports of Iodine

		Pounds	*Value*
1922		352,557	$1,024,609
1923		273,338	887,361
1924		Not available	
1925		246,474	889,860
1926		711,291	2,272,343
1927		926,492	2,900,514
1928		720,766	2,429,076
1929	6 months	339,885	1,208,197

From these figures it will be noted that imports of iodine into this country almost trebled in 1926; increased by almost the normal consumption in 1927; and then started to decline. In 1928 the imports were lower but still three times normal. In 1929 they promise to at least be well below 700,000 pounds.

The reason for the sudden increase in iodine imports, and the decline that has now set in is illegitimate alcohol. For despite, all the advances made by the newer antiseptic specialties at the expense of tincture of iodine, consumption of iodine in this country increased by leaps and bounds due to the fact that the tincture was most largely bought for the purpose of recovering the alcohol from it for use in alcoholic beverages.

It can be seen that this use for iodine started in 1926, reached its peak in 1927, and started to come under control of the Prohibition Department in 1928. And the new educational bureau must promote the consumption of iodine in this country in view of these past performances. There is no doubt that the imports will continue to decline despite any efforts on the part of the bureau or anyone else. The Prohibition Department evidently still has a long way to go.

As regards the consumption of iodine in medicinal products, the bureau of education will attempt to promote this important field of consumption as well as many others. The veterinary field offers an important channel of consumption in the belief of those charged with the promotion of iodine sales. A preparation of colloidal iodine has been placed on the market by a large drug manufacturing house, and according to reports, this house is expected to consume more iodine in the manufacture of this one product than had previously consumed in tincture and all the other products that they manufactured in years past.

The prevention of smut on various grains and various other avenues of consumption are being sought by the iodine producers of Chile in an attempt to increase their shipments of iodine to this country. Just how successful they will be lies in the future.

But the price of iodine from Chile has not varied and the drug manufacturers of this country continue to pay a shilling per ounce for large quantities. This means a price in this country of $3.88 per pound for the largest buyers. It is quite probable that the Chilean producers might be forced to lower this price or else reject a large channel of consumption that could only consume iodine if it were priced at lower levels. That such a condition has already been rejected by the Chilean producers who refused to lower their quotations is the report.

MORE ABOUT GINSENG

The following letter written to Louise Crane, author of an article that appeared in "Asia" in April and that was extracted in May DRUG MARKETS was written by Madeline Baker, of Harpenden, Herts.

Ever since I read, in the "Asia" of last March your article on the "Manchurian Man-Image," it has been my intention to write to you of my own experience with the remedy distilled from this root.

The great physician Paracelsus born in 1493, prepared a remedy for rheumatism and gout from these roots, and called it "Mandragora." The patients he treated with it recovered, and its fame travelled far; it was known in this country as "Mandrake."

There is a well-known Clinic in the neighborhood of Bâle in Switzerland, which has laboratories called the "International Laboratories of Arlesheim." Here many remedies whose use had been practically forgotten are prepared and used with marked success. I was a victim of "rheumatic gout" and had been treated in all the most highly approved ways known to modern medical men on the continent; but I could not be rid of the great lameness and the frequent pains until I took Mandragora sub-cutaneously. I speak of it with great enthusiasm as you can imagine, since its use from time to time, keeps my legs limber and free from pain and alleviates to a wonderful degree the distress in other portions of my body. The roots which they use, they get from Sicily, though I believe they once had roots also from Syria, but am not quite sure of this latter market. I do know that the roots are gathered with particular regard to the Moon's phase, as are many other vegetable remedies—this fact being perfectly comprehensible to any true Occultist.

The remedies and their manner of use, has been so very efficient that eight other Clinics have grown out of this one, in different parts of Europe, not to speak of other parts of the world; they are always full-up, and continually enlarging their premises.

While DRUG MARKETS realizes that testimonials are of doubtful value, there may be something in the medicinal value of ginseng after all.

Patents Issued

(*Continued from page 348*)

Homologues of Vanillin

Isochavibetol, particularly when prepared from safrol, is converted into the 3-ethyl ether of protocatechuic aldehyde, by ethylating and decompsing the resulting ethyl methyl ether with an alkali, and separating the 1-propenyl-3-methoxy-4-hydroxybenzene, which is mainly formed from the 4-methoxy compound. In an example, isochavibetol is dissolved in alcoholic potash solution and ethylated with ethyl bromide. The metyhl ethyl ether is decomposed with caustic soda in methanol, the methyl group being eliminated to a far greater extent so that the main product is 1-propenyl-3-ethoxy-4-hydroxybenzene which is purified from any of the 4-methoxy compound by recrystallizing the sodium salt or acidyl compound and is converted to the 3-ethyl ether of protocatechuic aldehyde in the usual way as by oxidation with ozone. F. Boedecker, Berlin, Germany. B. P. No. 309,929, filed Dec. 15, 1927.

1:5 -Disunstituted Tetrazoles

These synthetic drugs are prepared by first converting esters of the enolic form of monosubstituted acid amides into hydrazines by means of hydrazine and its salts, and then treating the hydrazine in known manner with agents capable of introducing the nitroso group, such as nitrous acid. The enolic esters may be prepared by subjecting esters of oximes, for example the sulphonic acid esters, to the Beckmann transformation, or by treating an oxime with an agent, such as phosphorus pentachloride, which simultaneously esterifies and converts into the Beckmann product, or by esterifying monosubstituted acid amides with organic or inorganic acylating agents, for example phosphorus pentachloride and oxychloride, thionyl chloride, and benzene or toluene sulpho chloride, in the presence or absence of basic substances, such as pyridine. A. Boehringer, Nieder-Ingelheim-on-Rhine, Germany. B. P. No. 309,949, filed April 5, 1929.

Hydrogenation and Dehydrogenation

Hydrogenated and dehydrogenated compounds are formed by causing the interaction of a more or less completely hydrogenated compound with a compound capable of taking up hydrogen in the presence of a hydrogenating catalyst or catalyst mixture. The reaction may be made continuous. For example isoborneol is heated with carbon monoxide under pressure in the presence of a catalyst, giving methanol and camphor. Schering-Kahlbaum A. G., Berlin, Germany. B. P. No. 310,055, filed April 20, 1929.

Hormones

Hormones, such as the ovarial and pituitary hormones, are obtained from the urine of pregnant individuals by stirring the preferably concentrated urine with adsorbents such as carbon or kieselguhr, or by filtration through these adsorbents. The hormones are extracted from the separated adsorbent material by fractional treatment with solvents. The ovarial hormones are first extracted with an organic solvent and the pituitary hormone is then obtained by extracting the adsorbent with an aqueous liquid of suitable pH concentration. The urine may be first freed from a specific hormone and subsequently treated with an adsorbent. Schering-Kahlmbaum A. G., Berlin, Germany. B. P. No. 310,056, filed April 20, 1929.

Nitrous Oxide

In preparing nitrous oxide by decomposition of ammonium nitrate or a mixture of ammonium sulphate and sodium or potassium nitrate, the decomposition is carried out in presence of ammonia which may be gaseous or in the form of solution. The reaction may be carried out in enamelled vessels or vessels of acidproof alloys, which may contain admixtures of indifferent salts such as sodium or potassium nitrate. W. Friederich, Cologne, Germany. B. P. No. 310,507, filed Feb. 15, 1929.

6-Alkoxy-5:8-Diaminoquinolines

These synthetic drugs are prepared by dinitrating the oxyquinoline, reducing the product and alkylating the diamino compound so obtained; or the oxyquinoline is mononitrated, alkylated and the alkoxy-mononitro compound further nitrated and reduced. Thus 6-methoxy-8-nitroquinoline is nitrated and the dinitro compound so obtained is reduced. 6-Oxy-5:8-diaminoquinoline is treated with dimethyl sulphate. 6-Methoxy-8-nitroquinoline may be prepared by converting 1-amino-2-nitro-4-oxybenzene to 6-oxy-8-nitroquinoline by Skraup's synthesis, and alkylating. By nitrating this oxy-mononitro compound and reduction, the 6-oxy-5:8-diamino compound is obtained. A. Rothmann, Charlottenberg, Berlin, Germany, assignor, Vereinigte Chemische Werke A. G., Berlin, Germany. B. P. No. 310,529, filed April 19, 1929.

Finger Nail Polishes

For polishing the finger nails a piece of cloth, chamois leather, fleece, paper, etc. is impregnated with nail polishing composition consisting of petroleum jelly, was (half paraffin and half beeswax), tallow, powdered silica, and ninety per cent. ammonia solution. F. A. Kessler, Mittweida, Saxony, Germany. B. P. No. 310,742, filed Oct. 9, 1928.

Medical Iodine Preparations

A solid preparation of iodine capable of being spread on the skin for medical and antiseptic purposes consists of iodine and potassium iodide added to a mixture of alcohol and an organic acid neutralized with an alkali. According to an example a solution of sodium hydroxide, or sodium, in alcohol is added to a hot alcoholic solution of benzoic acid. Iodine and potassium iodide are added to the neutral mixture, and the whole poured into moulds and cooled. The benzoic acid may be replaced by salicylic, phthalic, palmitic or stearic acid, or mixtures of such acids may be used. R. Geller, Karlsruhe, Baden, Germany. B. P. No. 310,869, filed Jan. 8, 1929.

Benzoyl Chloride

Benzoyl chloride is made by chlorinating benzyl alcohol. Either chlorine or chlorine mixed with hydrochloric acid is used as chlorinating agent. In practice this method is combined with the ordinary method of chlorinating benzaldehyde. Benzoyl chloride is also made from benzal chloride by treating it with benzoic acid and chlorinating the mixture of benzaldehyde and benzoyl chloride thus obtained. Other methods are given. Imperial Chemical Industries Ltd., London, England. B. P. Nos. 310,909 and 310,910, filed Feb. 2, 1928.

Insulin Preparations

Preparations of insulin suitable to be administered by the mouth are obtained by mixing insulin, or organs or preparations of organs containing it, with an organic acid, or a salt of an organic acid, or an agent yielding acid or splitting off formaldehyde, or a mixture of such substances. The preparations are put up in hardened gelatin capsules or as coated pills, so as to be protected against gastric digestion. Acids specified are fatty acids, and benzoic, hippuric, methylene hippuric, glutaric, glutaninic, mandelic and cinnamic acids; agents yielding acids are acid esters and acid amides such as fats and formamide; agents yielding formaldehyde are methylene hippuric acid, hexamethylenetetramine, methylene citric acid, paraformaldehyde and trioxymethylene. Dry insulin is mixed with hippuric acid and sodium hippurate, with methylene hippuric acid and with benzoic acid, paraformaldehyde sodium hippurate and glutaminic acid. K. E. Zipf, Muenster, Westphalia, Germany. B. P. No. 310,394, filed May 2, 1929.

Borneol

Borneol is made by heating nopinine with an organic acid anhydride and slowly adding alcohol to produce nascent organic acid which reacts with nopinine to form bornyl ester. The

process can be carried out under pressure and preferably in the presence of a solvent such as toluene, xylene or pinine, which does not react with the nascent acid. G. Austerweil, Boulogne, France. B. P. No. 311,085, filed May, 1928.

GERMAN PATENTS

Isopropylallyl-Barbituric Acid Derivative

Isopropylallyl-barbituric acid is melted together with 1-phenyl-2*:3-dimethyl-amino-5-pyrazolon in equi-molecular proportions. The product is a synthetic drug. F. Hoffmann-La Roche & Co.; A. G., Basel, Switzerland. G. P. No. 471,655, filed Nov. 1, 1921.

Transparent Soap Flakes Containing Active Oxygen-Yielding Substances

Transparent flakes are obtained from mixtures of soaps with active oxygen-yielding substances by adding hydrocarbons of the formula, $C_nH_{2n\ 2}$ and C_nH_{2n} with more than nine carbon atoms to the mixture of dry soap and oxygen-yielding substances. Oxy-derivatives of the aforementioned hydrocarbons may be added and also esters of these derivatives. E. Flammer and Dr. L. E. Kelber, G. P. No. 472,047, filed April 12, 1925.

Odorless and Non-irritating Radish Preparation

The fresh roots of the radish are cut up into small pieces and mixed with adsorption charcoal or the juice, that is obtained from the radish, is treated in this manner. The product that is obtained in this manner is then dried and used. Chemische Fabrik vormals Sandoz, Basel, Switzerland. G. P. No. 472,079, filed June 29, 1927.

Specific Antibodies Against Tuberculosis

Animals, like the guinea pig, which are susceptible to tuberculosis, are inoculated with a glycerin emulsion of virulent and living tubercle bacilli at definite time intervals and in increasing doses, and at the end of the third injection after the tenth day, the animal is put to death in a lethal chamber with chloroform. The suprarenal glands are removed in as sterile a state as possible and are cut up into a mash. The mash is extracted in a dark colored flask with an aqueous glycerin solution and the extract thus obtained, after being kept in a cool place and subjected to frequent shaking for three days, is heated for twenty minutes on the water bath, then centrifuged and filtered to obtain a clear solution. This solution is mixed with a few particles of crystalline thymol. Dr. R. Griesbach, Bad Homburg, Germany. G. P. No. 472,080, filed March 29, 1927.

Stable and Non-Irritating Calcium Solution

The calcium solution is characterized by remaining stable and clear for a long period of time; it is concentrated and used intramuscularly and does not produce irritating effects when it is injected. It is made in the following manner. A concentrated solution of calcium gluconate is filled into the ampulles in the hot state and the latter are hermetically sealed which may be accompolished by fusing the ends. The ampulles are then heated at definite intervals until no crystals form any longer. Chemische Fabrik vormals Sandoz, Basel, Switzerland. G. P. No. 472,346, filed November 27, 1926.

Protective Medicaments Against Tumors

Animals, that are naturally suffering from tumors or injected to create tumors in them, are systematically treated with emulsions of corresponding tumors or swellings. During or after the swelling has started to form, the exudations in the pleural and adbominalcavities or the serum is obtained in the usual manner. Aktiengesellschaft Chemischer Werte, Berlin, Germany. G. P. No. 472,220, filed, July 3, 1926.

Terpene Hydrocarbons from Juniper Oil

Juniper oil is extracted with 65 per cent. alcohol and that portion of the residue of the alcoholic extract, which boils at approximately 163 degrees C., is separated by fractional distillation. Dr. W. Straub, Munich, Germany. G. P. No. 472,540, filed Dec. 18, 1927.

Medicinal Soap From Natural Amber

The soap is transparent and light colored and has medicinal properties. Amber oil is added to the freshly prepared soap paste which is made from fats or solidified oils, lye and alcohol. An aqueous solution of succinic acid is added to the finished soap. H. Hoffmueller von Kornatzki, Ziegenhagen, Post Reetz, Kr. Arnswalde, Germany. G. P. No. 472,440, filed Aug. 27, 1925.

Methanol-Free Formaldehyde Solutions

Formaldehyde is obtained free from methanol while the latter is separately recovered. The methanol-containing aqueous solutions of formaldehyde are mixed with a quantity of materials containing alcoholic hydroxyl groups, not in excess of 25% of the formaldehyde present, the aforementioned materials being of the nature to form solid solutions with formaldehyde or water-insoluble addition compounds. The mixture is then fractionated for the purpose of separating out the methanol. Chemische Fabrik von Heyden A.G., Radebeul, Dresden, Germany. G.P. No. 470,267, filed May 5, 1923.

1:6-Dimethylacenaphthenequinone

This compound is made from 1:6- dimethylnaphthalene which is condensed with oxalyl chloride in the presence of an inert solvent at low temperature, the condensing agent being aluminum chloride. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. G. P. No. 470,277, filed Nov. 22, 1925.

Medicinal From Lecithin And Glycerin

This product is used for injection purposes subcutaneously and intravenously. The fluidity of the liquid is increased by the addition to the emulsion of lecithin in glycerin of electrolytes in such small proportions that no precipitation of the lectihin takes place. Sodium, potassium, calcium or magnesium salts are used for this purpose. Chemische Fabrik Gruenau Landshoff & Meyer A.G., Berlin-Gruenau, Germany. G. P. No. 470,954, filed Oct. 24, 1924.

Stable Vitamin-Rich Compressed Juices

These juices are obtained from chlorophyll-containing plants or parts of plants. A suitable amount of a calcium salt is added to the juice, as for example the citrate, lactate, or carbonate, as well as of an aliphatic oxy-acid which is un-injurious to the food value of the preparation. The mixture is then heated in absence of air at 100° C. The liquid which is freed from the precipitate is again heated in closed vessels, advantageously in the atmosphere of an inert gas, such as nitrogen or helium, at about 100° C. for sterilization. Dr. J. Korselt, Zittau, Saare, Germany. G. P. No. 470,012, filed Jan. 18, 1927.

Solutions of Basic Quinine in Oils

Other solvents besides terpenes or terpene-containing substances are used, or the terpenes are employed with the new solvents. Amongst these solvents are oil-soluble alcohols such as octyl alcohol, decyl alcohol, benzyl alcohol and the like. It is also possible to add other difficulty soluble or insoluble substances with therapeutic properties. Chemisch-Pharmazeutische A.G. Badl-homburg, Bad Homburg, Germany. G. P. No. 470,955, filed March 6, 1927.

Process For Isolating Invisible Virus

This pertains particularly to the isolation of the virus of the smallpox germ and its separation from other accompanying bacteria. The material, which is unavoidably contaminated with bacteria, is allowed to rise in wicks made of filter paper or other suitable porous materials. The result is that the liquid takes up the bacteria to much less height than the virus. Separation is thus effected. Dr. E. Friedberger, Berlin-Lichterfedle, Germany. G. P. No. 471,105, filed June 8, 1927.

DOUBLE CITRATES OF BISMUTH AND QUININE *

THE citrates of bismuth and quinine have not yet been described. The formula for bismuth citrate, which was used in the preparation of several of these salts, is given differently by different investigators. Fabregues (see "These de Pharmacien Superieur," Montpellier 1925) isolated an ammoniacal citrate of bismuth and gave it the following formula:— $(NH_4COO)CH_2.COH:COOH.NH_4(CH_2.COOBi:O)$. Picon also studied this question and reported his findings in "Journale de Pharmacie et de Chimie," 1927, eighth series, 7, pages 62ff, and showed that the processes which were actually used in the preparation of the salt led to the formation of two citrates of bismuth, one of which was mono-acidic and the other di-acidic. The formulae for these compounds are as follows:—$COOH.CH_2C(COOH)(CH_2COO)(OBiOH)$, and $(COOH).C(CH_2COO)_2(OBi)$.

Fabregues in an article, which was published in 1927 (see "Revue Medicale de France et de Colonies," 1927), showed that citrate of bismuth and urotropine, which is prepared according to a method given by the author, "does not appear to be constituted of a definite compound, but is rather a more or less complex colloidal mixture, which has the nature of an addition product."

The author was interested in preparing a certain number of citrates of bismuth and quinine, starting either from the di-acidic bismuth citrate, or from the chlorides of bismuth and quinine. The author has been able to isolate five crystalline salts, three acid, one basic and one neutral.

1. Acid Double Citrates of Quinine and Bismuth.

The first citrate has the formula $C_6O_7H_6BiOH.2(C_6O_7H_8.C_{20}H_{24}N_2O_2).2H_2O$. This is made by dissolving thirty grams of di-acidic citrate of bismuth in a sufficient quantity of an official ammonia solution of ten per cent concentration per volume in order to obtain complete solution. The mass is gently heated, in order to drive off the excess of ammonia until the appearance of a thin film on the surface of the liquid.

On the other hand, 65 grams of neutral quinine hydrochloride are dissolved in two liters of distilled water which contains fifty grams of citric acid. The solution is heated over the naked flame, the heating being continued until the boiling point of the solution has been attained; then the first solution is poured into the second, small quantities at a time, until the precipitate, which is formed each time, has dissolved. When this operation is finished, the solution is allowed to cool off. Crystallization commences at once. When this is complete, the product is recovered and dried on a porcelain funnel provided with a perforated filtering plate. After remaining for two or three days in a two per cent. concentrated citric acid solution, the salt is washed and completely freed from the hydrochloric acid which comes from the quinine salt used, and also in large part of its ammonia content. The salt is then dried again, and dessicated in a vacuum in the presence of phosphoric anhydride. Purification is completed in this manner and after each washing it is advisable to determine the ammonia in the salt. The author has found that this varies between 0.84 to 0.40 per cent.

The salt was analysed to determine the percentage composition and the amount of essential elements contained in it. Bismuth was determined in the form of bismuth trioxide, Bi_20_3, by simple calcination. The method that was used for the determination of quinine is the same that was used for the determination of quinine in the double bismuth and quinine chlorides. (1). The water of crystallization was determined by dehydrating the salt in a drying oven at a temperature of 100 to 105 degrees C, until constant weight was obtained in the dehydrated salt.

The free acid and also the total citric acid in the salt were also determined. The free acid was determined by titrating the solution of the salt with normal solution of soda in the presence of phenolphthalein, the weight of the test sample being 0.50 to one gram. This amount of the salt is dissolved in half a liter of distilled water. The acidity is expressed by the number of radicle, COOH, per molecule. In order to determine the total citric acid in the

*Journal de Pharmacie et Chemie.

salt, the salt is agitated at the boiling temperature with an excess of normal soda solution for a period of fifteen minutes. After the solution has been allowed to cool off, it is filtered in order to remove the bismuth and quinine which are insoluble in it, and then the excess sodium hydroxide is titrated back by means of a normal solution of sulfuric acid.

The following results were obtained. The figures are given in the tabulation which follows, showing the composition of the citrate.

	Theoretical percentage	*Percentage found*	
Oxide of bismuth, Bi_2O_3	15.63	15.81	16.60
Anhydrous quinine	43.69	43.82	43.51
Anhydrous citric acid	38.84	38.54	39.41
Free acid expressed as number of COOH radicles	4.	4.4	4.2
Water	3.64	3.62	3.58

The following is another method of preparing the double citrate. The same variety of double citrate is obtained by dissolving two and one-half grams in two liters of citric acid solution at the rate of two and one-half grams per hundred cubic centimeters, the solution being brought up to the boiling point. This boiling solution is then used as a solvent for a mixture of fifty grams of the double chloride of bismuth, which has the following formula, $BiCl_3(C_{20}H_{24}N_2O_2.2HCl)_2$ and eighty grams of sodium citrate (properties official in French Pharmacopeia). After the solution has been allowed to cool off, the double citrate crystallizes. It is then recovered, washed, and dried in the same manner as described in the first method. The analysis of this product gives the following figures:—15.71 to 15.76 per cent. of oxide of bismuth, 42.10 to 43.77 per cent. of anhydrous quinine, 40.62 to 39.88 per cent. of citric acid and 3.86 to 3.70 per cent. of water.

The properties of this substance, which has therapeutic properties, are as follows. It comes in the form of a white powder and has a bitter taste, also resembling that of a metal. The crystals are perfectly formed and are fine microscopic needles. It contains 14.02 per cent. of bismuth. It loses three molecules of water at a temperature of 100 degrees C and then it contains 14.55 per cent. of bismuth. It will dissolve completely in water but only in a small proportion, namely three and one half grams per liter of water at the ordinary temperature. It is insoluble in absolute alcohol, ether, chloroform, benzene and olive oil.

Another citrate of bismuth and quinine was obtained, and this had the following formula:—$C_6O_7H_6.BiOH.C_6O_7H_8.C_{20}H_{24}N_2O_2$. The method of obtaining this citrate is exactly as in the first case. Both the two methods explained above are used. The proportions which are used in the first method with citrate of bismuth are fifty grams of bismuth citrate, and a sufficient quantity of ammonia in concentration 1.10 so as to form a complete solution. The quinine solution is made from 7.5 grams of neutral quinine hydrochloride, fifty grams of citric acid and two liters of water. In the second method, the double chloride of quinine and bismuth is used as the starting point, and the mixture employed has the following composition:—fifty grams of the double chloride, $BiCl_3.C_{20}H_{24}N_2O_2.2HCl$ and eighty grams of crystalline sodium citrate. This mixture is dissolved gradually in two and one half liters of water containing sixty grams of citric acid.

The two salts which were obtained in this manner were analyzed and the following composition was obtained.

	Theoretical percentage	*Percentages found*			
		From Citrate method		*From double chloride method*	
Bismuth oxide Bi_2O_3	24.91	24.54	24.69	24.55	24.70
Quinine	34.80	33.49	34.81	33.69	33.81
Citric acid	41.24	42.64	40.79	41.89	39.98
Acidity expressed in number of COOH radicles	3.	3.7	3.6	3.6	3.3
Water	1.93	1.88	1.90	1.90	1.94

The properties of the citrate which is obtained as above are as follows. The citrate is obtained in the form of a white powder which is crystallized in microscopic needles, and contains 22.34 per cent. of bismuth. The salt loses a molecule of water at a temperature of 100 degrees C and then its formula becomes $C_6O_7H_5Bi.C_6O_7H_8C_{20}H_{24}N_2O_2$, and contains 22.78 per cent of the metal.

It dissolves completely in water but only in small proportions, that is at the rate of three and one-half grams per liter of water at the ordinary temperature. It is insoluble in the usual solvents, such as absolute alcohol, ether, chloroform, benzene and olive oil.

Still another acid citrate can be formed. This has the following formula:—$(C_6O_7H_6BiOH)_2.C_6O_7H_8.C_{20}H_{24}N_2O_2$. This citrate is made in the same manner as the others, starting from bismuth citrate, but the following proportions are used:—52 grams of citrate of bismuth and enough dilute ammonia of 1.10 concentration to make up the first solution, and 36.4 grams of quinine hydrochloride, 50 grams of citric acid and two liters of water to make up the second solution. The author washed the precipitate three times with a solution of citric acid of two per cent. concentration, and then he analyzed the product and found the following percentages of ammonia, namely 1.30 per cent., 0.92 per cent. after the second washing and finally 0.20 per cent. after the third and last washing. The analysis of the products after the washing with citric acid was as follows:—

	Theoretical	*Found*	
Bismuth oxide	34.47	33.41	34.62
Anhydrous quinine	24.07	23.88	23.67
Citric acid	42.79	41.83	41.10
Free acid radicles	5.	5.2	5.3
Water	2.67	2.81	

The properties of this double citrate of bismuth and quinine are as follows. The citrate comes in the form of a white microcrystalline powder; it has an acid and metallic taste. It contains 30.90 per cent. of bismuth. When heated to a temperature of 100

degrees C, it loses two molecules of water and the formula then becomes:—$(C_6O_7H_5Bi)_2.C_6O_7H_8.C_{20}H_{24}N_2O_2$. It then contains 31.75 per cent. of the metal. The double citrate is slightly soluble in water which dissolves three grams per liter and it is insoluble in the common solvents of the type mentioned above in the other citrates.

II. Non Acidic Double Citrates of Bismuth and Quinine.

These double citrates of bismuth and quinine, which are not acid, are prepared by allowing boiling water to act on a finely pulverized mixture of the corresponding double chloride of bismuth and quinine and citrate of soda, in the absence of citric acid.

The basic double citrate of bismuth and quinine has the following formula:—$C_6O_7H_6BiOH.C_{20}H_{24}N_2O_2$ This salt is made in the following manner. Twenty grams of the double chloride of quinine and bismuth, $BiCl_3(C_{20}H_{24}N_2O_2.2HCl)_2$, and fifteen grams of sodium citrate are mixed together and pulverized. Six hundred cubic centimeters of water at the boiling point are thrown on this mixture and the mass is then vigorously agitated until double decomposition takes place. This is recognized by the formation of a voluminous white crystalline precipitate in fine microscopic needles. After the product has been allowed to remain at rest for twenty-four hours, it is removed from the solution, dried, and then washed by allowing it to remain in contact with distilled water for twenty-four hours. No citric acid is used in the water, for this would convert it into the acid citrate. The product is washed three successive times and it then contains approximately one per cent. of sodium oxide. However, the author has proven that even though the product is washed several times more with distilled water, the percentage of sodium oxide contained in it is not materially reduced. The analysis of the product gave the following results:—

	Theoretical	*Found after three washings*		*Found after five washings*
Bismuth oxide	21.62	20.63	20.44	20.69
Anhydrous quinine	60.39	60.66	60.00	
Anhydrous citric acid	17.89	18.02	18.42	
Water	1.67	1.90	1.80	

The properties of the basic double citrate of quinine and bismuth are as follows. The salt is obtained in the form of a white powder which is crystallized in fine microscopic needles. The salt contains 19.38 per cent. of bismuth. When it is heated to a temperature of 100 degrees C, it loses one molecule of water of crystallization and then the formula becomes:—$C_6O_7H_5Bi(C_{20}H_{24}N_2O_2)_2$, which then contains 19.71 per cent. of the metal. Water will dissolve the salt at the rate of 2.9 grams per liter. The salt is insoluble in the solvents which have been mentioned above in describing other double citrates of quinine and bismuth.

There is still another double citrate of bismuth and quinine possible, and this has also been prepared. It is the neutral bismuth-quinine citrate and has the following formula:—$C_6O_7H_6BiOH.C_{20}H_{24}N_2O_2$. It is prepared by the same method as described for the basic double citrate of bismuth and quinine. Fifteen grams of the double chloride of bismuth and quinine, $BiCl_3.C_{20}H_{24}N_2O_2.2HCl$, and the same quantity of sodium citrate are acted upon by boiling hot water and the neutral citrate is obtained. After it has been washed three times with distilled water, it is found still to contain 1.33 per cent. of sodium oxide, or 0.88 per cent. of sodium. The analysis of the neutral citrate gave the following results.

	Theoretical	*Found after three washings*		*Found after our washings*
Bismuth oxide	31.39	30.70	30.93	31.12
Anhydrous quinine	44.83	41.60	41.97	42.84
Anhydrous citric acid	25.98	24.24	24.98	25.82
Water	2.43	2.80	2.66	

The properties of the neutral double citrate of quinine and bismuth are as follows. The salt is obtained in the form of a micro-crystalline powder which contains 28.14 per cent. of bismuth. When it is heated to a temperature of 100 degrees C, it loses one molecule of water and then contains 28.84 per cent. of the metal. Water will dissolve the neutral double citrate of quinine and bismuth at the rate of 2.8 grams per liter. This salt is likewise insoluble in all the common solvents which have been mentioned in discussing the other double citrates.

Suspensions of the double citrates of bismuth and quinine have been prepared in oil. The formula of the double citrate used is as follows:—$C_6O_7H_6BiOH.C_6O_7H_8C_{20}H_{24}N_2O_2$. The same method is used for the preparation of bismuth carbonate ampules. The biological experiments were carried out with these suspensions.

In the first place, these suspensions were injected intramuscularly into dogs, and it was found that the salt is quite slowly eliminated. Bismuth was found in the urine after 23 to 25 days, the quantity eliminated being 54 per cent. of the dose that was introduced. As far as the quinine was concerned, the elimination took six days in two cases with 32 per cent. of the alkaloid being found in the urine.

Consideralbe quantities of the double citrate were injected into the lower members of the guinea pig, the dose amounting to five to twenty centigrams per kilogram weight of animal. It was found that a condition of intoxication arose, as well as reduction in weight. The doses, however large they might have been, did not cause death.

On the other hand, when aqueous solutions of the same double citrate were injected into mice intravenously, the mice survived when the dose was 12.5 milligrams of bismuth per kilogram, weight of the mice, while death was caused by larger doses. This salt is thus slightly more toxic than diammonium-bismuth citrate, the limiting dose of which is 14. milligrams of bismuth.

Tests were finally made with oily suspensions of the citrate on infants. The doses were injected at the rate of 1.5 milligrams of bismuth per kilogram weight per week. The tolerance and the therapeutic action of the salt were satisfactory (*Note* 1). The method used for the determination of quinine is the same as that described by Francois and Seguin in "Journal de Pharmacie et Chimie," 1925, vol. II, page 59. This method has been modified to a certain extent by weighing the anhydrous quinine at the end, as it is obtained by the evaporation of the chloroform solution, obtained in extraction.

Charles Pfizer Dies

Charles Pfizer, son of the founder of the chemical firm of Charles Pfizer & Co., New York, died October 6 at his home in Bernardsville, N. J., at the age of 68, after an illness of several years. He is survived by his wife, Nana E. Pfizer; two sisters, Lady Duncan and the Baroness Bachafen von Echt, and two brothers, Adolphus and Emile Pfizer, the latter now president of Charles Pfizer & Co.

Mr. Pfizer's father, also named Charles, came to this country from Germany during the revolution of 1848. He established the chemical business that still bears his name and developed it so that the one fourth share inherited by his son, Charles, was valued at $500,000. With this and other property the younger Charles Pfizer lived for some years as a wealthy sportsman in the United States and Europe.

Canada Requires Registration of Proprietary Medicines

Canada—A Canadian order in council of Aug. 7, 1929, published in the Canada Gazette, Ottawa, adds the following patent drugs to the schedule of the proprietary or patent medicine act: Phenobarbital, beta naphthol, ephedrine salts, and phosphorus.

Under the above act, manufacturers of proprietary or patent medicines, or their agents, are required to obtain from the Canadian minister of health a numbered certificate of registration for each proprietary or patent medicine intended for importation or sale in Canada, and when applying for such certificate for the registration of medicines containing any of the drugs mentioned in the schedule he must furnish a statement, under oath, as to the quantity of such drug or drugs contained in the product. The names of the drugs and the amounts per dose are required to be shown on labels and wrappers of bottles, boxes, or other containers of medicines in which are contained any of the drugs specified in the schedule.

Monsanto Bowling League opened their season Sept. 23, with twelve teams composed of men at the plant and offices going into action at St. Louis. More than 150 turned out for the opening night. A meeting is planned for every Monday evening. Each team is named after some product made in the Monsanto Works, namely, salicylates, phenol, etc. and a good deal of rivalry was manifested between the teams. The highest individual score, 212, was made by Bill Decker.

O. N. Davis, president of the Chicago Drug and Chemical Association recently appointed the following members to the Banquet Committee, which will make all arrangements for the year's most important function in December: R. A. Whidden, chairman; Wm. O'Neill, vice-chairman; Chas. Curtis, O. M. Krembs, E. L. Drach, L. A. Lanigan, H. E. Lancaster, B. F. Zimmer, E. P. Gibney, W. B. Erb, C. Christensen, and Euclid Snow.

F. M. Biffen, chemist for ten years with the British Government Laboratories, has taken a position with Foster Dee Snell.

Research on Light Deterioration in Colored Glass Inaugurated

Actual research on the matter of the deterioration of chemicals and pharmaceuticals under the influence of light began in September under the direction of Dr. H. V. Arny, Columbia University, and Dr. S. H. Ayers, Glass Container Association, New York. This work is made possible by donations totalling $2,000 to the Committee on Glass Containers of the American Pharmaceutical Association of which committee Dr. Arny is chairman.

Eighteen subscriptions of $100 each were obtained from: W. R. Warner & Co., Hynson, Westcott & Dunning, Eli Lilly & Co., Charles Pfizer & Co., Parke, Davis & Co., Dow Chemical Co., Sharp & Dohme, F. R. Squibb & Sons, Lehn & Fink, Merck & Co., Drug Products Co., Frederick Stearns & Co., Purdue Frederick Co., H. K. Mulford Co., The Wm. S. Merrell Co. William Jay Schieffelin, The Proprietary Association, and the Upjohn Co.

A grant of $200 from the American Pharmaceutical Association Research Fund completes the available funds for starting the research.

Doan, Dow Sales Manager

Leland I. Doan has been appointed general sales manager of Dow Chemical Co., Midland, Mich., succeeding G. Lee Camp, recently resigned. For some time past Mr. Camp has been in poor health and asked to be relieved of his responsibilities. He will continue to serve Dow Chemical Co. in a consulting capacity.

New Cod Liver Oil Method

Practical tests in a new method of extracting cod liver oil, recently developed at Lofeten, Denmark, are said to have been substantiated by further laboratory tests carried on by the Danish director of research on fish products, the Department of Commerce was informed Sept. 21 by the trade commissioner, Gudrun Carlson, at Oslo, Norway.

The full text of the Department's statement follows:

German experts have conferred with the Danish director on the type of machinery needed to develop the project. It is estimated that the principal part will cost about 8,500 kronen (approximately $2,300), and all the apparatus needed for a capacity of about five barrels of oil an hour will total about 10,000 kronen (approximately $2,700). In the opinion of the originator of the method a better quality oil as well as a greater yield will be obtained by this means.

Phoenix-Hermetic Co., and Giles Can Co., a division of Phoenix-Hermetic, announce the removal of their offices from 1211 Chestnut St. to 505 Fox Building, Market and Sixteenth st., Philadelphia. The new office remains under the direction of C. B. McDow.

J. Wrench, Sales Manager of the Industrial Chemical Sales Co. Inc., has just returned from a very successful three weeks trip to the Pacific Coast, made in connection with the expansion of their business in this territory.

The Humphrey Drug & Chemical Co., Newark, N. J., has appointed Chas. Dallas Reach, advertising agency of that city, to direct its advertising account. Newspapers will be used.

The Financial Markets

Zonite Buying Forhan, Paris

Zonite Products Corp. announce that negotiations are in progress for the acquisition of the Forhan Co. Ellery W. Mann, president of Zonite stated, however, that purchase has not yet been consummated.

It is understood that the purchase price will be approximately $10,000,000, to be financed partly through exchange of stock and partly through cash.

In 1928 Forhan's net income was $1,006,257, as compared with $752,932 in 1927, $631,204 in 1926 and $550,835 in 1925. In 1928 Forhan earned $3.65 a share on the 150,000 Class A common shares outstanding and $3.05 on the 150,000 voting common shares, compared with $2.81 and $2.21 a share, respectively, in 1927, and with $1.65 on Zonite's 176,000 shares in the twelve months ended June 30, 1929.

Recent stock offering of Zonite at $30 a share brings outstanding stock to 376,000 shares, as against Forhan's 300,000.

Zonite Products Corp., as is reported in the financial district, is engaged in negotiations for the acquisition of the Paris Medicine Co. of St. Louis. Paris Medicine is the manufacturer of the well-known medicinal preparation, Grove's Laxative Bromo Quinine. Completion of the negotiations is expected to be announced in the near future.

This latest acquisition, when consummated, will give Zonite Products its largest single addition since its organization. The medicinal product of the Paris Medicine Co. has been on the market since 1889 and has one of the largest sales turnovers of the prepared pharmaceuticals.

Final details of the acquisition of the Forhan Co., dentifrice manufacturer, have not been settled, but Zonite products called a meeting of stockholders for October 18 for the purpose of approving an increase in the authorized capital of the company in order to complete this acquisition.

It has been proposed to increase the stock from 500,000 to 2,000,000 shares. The company has increased the annual dividend 60c from $1 to $1.60 a share. The directors also recommended an offering of additional stock to shareholders at a price of $30 per share, in the ratio of one new share for each four held.

Bristol-Myers Co. declared two dividends one of $5 and the other of 83⅓ cents, both payable October 9 to stock of record October 7. Dividend of 83⅓ cents represents the equivalent of a dividend for the two months ended September 1 at quarterly rate of $1.25 a share. Shareholders approved a plan under which the business of the company is to be acquired by Drug Inc., and the company will be dissolved. On dissolution, shareholders will be entitled to receive certificates for 1⅓ shares of capital stock of Drug Inc., for each share of Bristol-Myers stock held.

McKesson & Robbins have entered into a contract with Loft, Inc., under which Loft candies will be sold exclusively by an association of 16,700 stores throughout the United States and Canada, closely affiliated with McKesson & Robbins. Distribution will be made through 65 branch jobbing houses, located throughout the country.

The first order received by Loft on closing the above contract was for 625,000 pounds of candy, of which 125,000 pounds is to be delivered immediately and the balance within two weeks.

Emerson Bromo-Seltzer Refinanced

Emerson's Bromo Seltzer, Inc., has been organized under the laws of Maryland as a holding company to acquire substantially all of the outstanding stock of the Emerson Drug Co., manufacturer of bromo seltzer, and all of the stock of the Maryland Glass Corp.

The new company will have an authorized capitalization of 100,000 shares of 8 per cent. cumulative preferred stock of $25 par value, 56,000 shares of Class A non-voting stock of no par value and 844,000 shares of Class B stock of no par value. Neither company to be taken over has any funded debt. The combined current assets on June 30 exceeded $2,600,000, while current liabilities were about $400,000.

An offering of 56,000 shares of Class A Non-Voting Common Stock of no par value of Bromo-Seltzer, Inc., priced at $33.00 per share has been made The Century Trust Co., Baltimore. The capitalization of the company upon completion of financing will be as follows:

	Authorized	*Outstanding*
8% Cumulative Preferred Stock ($25 Par)	100 000 shs.	100,000 shs.
Class A Non-Voting Common Stock (No Par)	56,000 shs.	56,000 shs.
Class B Common Stock (No Par)	844,000 shs.	630,836 shs.

The holdings of the company include, besides the Bromo-Seltzer plant in Baltimore, a Bromo-Seltzer in Toronto, Canada; Citro Chemical Co., Maywood, N. J.; 200 acres of land and an electrolytic bromide manufacturing plant and wells in Midland Mich., available for production of bromides for use in Bromo-Seltzer should occasion demand; Maryland Glass Corp. which supplies to other manufacturers three times as many bottles as it supplies for Bromo-Seltzer, and whose plant has a capacity of over 72,000,000 bottles per annum.

Net profits of The Emerson Drug Co., which represents the Bromo-Seltzer end of the business, for the last four years and one-half years have averaged $1,477,249.01 after depreciation and federal taxes. And for the first six months of 1929 earnings have been $967,413.98, or at the rate of $1,934,827.96 per annum. The company has an unbroken dividend record since its inception in 1891.

Net profits of Maryland Glass Corp. after depreciation and federal taxes have averaged for the last four and one-half years $179,571.95, and for the first six months of 1929 earnings totaled $146,592.34, or at the rate of $293,184.68 per annum.

It is the intention of the board of directors to pay on the stock offered at least $2.00 per annum. Class A and Class B stock are equal share for share in their rights in any cash distribution of cash or stock dividends, or assets. The Class B stock, 67% of which is owned by present management, has sole voting power.

Eastern Drug Co. of Boston, a subsidiary of McKesson & Robbins, has changed its name to Cutler-Jenney Drug Co. Charles F. Cutler is president of the company; Sewall Cutler, past president of the National Wholesale Druggists' Association, is secretary, and Bernard Jenney is treasurer.

Noxzema Chemical Co. has appointed J. Marvin Shaw sales manager. Mr. Shaw was at one time manager of the Baltimore office of the Interstate Corrugated Box Co. of Brooklyn, N. Y. in which capacity he directed operations in Maryland, Delaware, Virginia and the District of Columbia.

Ritter Dental Mfg. Co., Inc., declared regular quarterly dividend of 62½ cents on common, payable October 1 to stock of record Sept. 25.

Coty Balance Improves

Statement of Coty, Inc., as of June 30, 1929, shows total assets of $10,552,832, comparing with $10,107,331 on December 31, 1928, and capital stock and surplus of $8,432,356 against $7,938,371. Current assets totaled $8,754,263 and current liabilities $1,614,590, comparing with $8,199,272 and $1,571,664, respectively, on December 31, 1928.

Consolidated balance sheet of Coty, Inc., and subsidiaries, as of June 30, 1929, compares as follows:

Assets

	June 30, '29	*Dec. 31, '28*
*Mach, equip, installation, etc.	$216,412	$246,094
*Building improvements	132,713	133,204
Goodwill, formulae, trade names, etc.	1	1
Cash	399,189	419,081
Accounts receivable	2,011,908	2,436,371
Marketable securities	282,702	209,152
Inventories	†6,060,464	5,134,669
Secur held as collateral	510,196	600,742
Investments—foreign	875,018	875,018
Rent deposit, etc.	20,667	20,678
Prepaid items	43,562	32,321
Total	$10,552,832	$10,107,331

Liabilities

Capital stock	‡$1,743,640	$1,694,529
Collateral trust 5% bonds	500,000	590,000
Accounts payable	154,831	106,376
Notes payable	700,000	750,000
Due from officers and salesmen	38,851	.....
Fed income taxes (1929 installments)	282,224	.....
Accrued expenses, etc.	62,500	149,006
Tenant security deposits	2,692	2,692
Fed and state tax res	335,961	563,591
Reserve for employes' bonus	35,400	.....
Treatments unfilled	2,132	.....
Min stockholders' int. in sub cos	5,886	7,295
Earned surplus	†6,688,715	6,243,842
Total	$10,552,832	$10,107,331

*After depreciation. †Estimated. ‡Represented by 1,349,045 no par shares.

Net profit of Coty, S. A., the French subsidiary, of Coty, Inc. in 1928 was $1,693,332, of which $940,000 was paid out in dividends. Net profit in 1927 was $1,584,444, of which $784,000 was paid in dividends. Sales were $8,629,420, against $8,338,663 in 1927.

Trading in the stock of Coty, S. A., began Sept. 20 on the Paris Bourse. Total stock outstanding is 600,000 shares of 100 francs par value. A substantial block has been privately placed with French banking interests. Its introduction to the Paris Bourse is part of the plan for the affiliation of all of the Coty companies and the application of the American company's merchandising methods to the foreign units.

Coty, S. A., increased its capitalization to 400,000 shares from 200,000 shares in 1927 and in July, 1929, increased it to 600,000 shares from 400,000 shares. Prior to the acquisition of an additional interest in the company. Coty, Inc. the American company, held 50,000 shares of the 400,000 shares.

Drug, Inc., it is estimated unofficially, will earn more than $10 a share this year. It had previously been estimated that earnings would be somewhat better than $7 a share. There has been buying of Drug, Inc. on recessions because of the new estimates.

International Perfume Co., Inc. shows net income for six months ended June 30, 1929, of $198,737 after charges and federal taxes. Capitalization consists of 61,112 no-par shares of preference stock, and 392,225 no-par shares of common.

Vick Financial Over-subscribed

Vick Financial Corp. stock offered July 18 by the Vick Chemical Co., to its druggist customers in the United States and Canada, has been over-subscribed to the extent of $5,000,000. This cash over-subscription will be returned with 6% interest, according to H. S. Richardson, president of the Vick Financial Corp. and chairman of the Vick Chemical Co. About 6,000 druggists responded to the offer, and it has been necessary to cut the final allotments, made recently, from 80% to 50%.

When Vick Financial Corp. was formed in June with $20,000,000 common stock authorized to give the Vick Chemical Co. an investment banking connection to handle its surplus funds and to finance future expansion, it was announced that the former would begin business with capital in excess of $6,000,000. With the present subscriptions from druggists and other stock reserved for other purposes also subscribed, the total authorized $20,000,000 common stock has been taken up.

Drug Stocks Follow Down

Drug and cosmetic stock market prices have dropped with the rest of the market during the past several weeks, as measured by the indexes of the Standard Statistics Co., of New York, although on October 3 they were still above the low for the year registered on August 15. The drug stock prices indexes and those for 338 stocks in all industries for recent weeks, follow:—

	Drugs and Cosmetics	*338 Stocks all Industries*
Oct. 3	217.6	201.6
Sept. 26	228.7	213.3
19	222.4	218.5
12	223.6	216.9
5	223.7	215.8
1929 High	260.6	218.9
Low	215.9	182.4
1928 High	264.3	186.4
Low	166.8	132.5

Parke, Davis Buys Capsule Business

Oscar W. Smith, president of Parke, Davis & Co., Detroit, announces that his company has purchased the capsule division of the Arthur Colton Co. also of Detroit, The Arthur Colton Co. retains its manufacture of pharmaceutical machinery, and will continue to supply all such machinery with the exception of the capsule manufacturing machinery which now becomes the property of Parke, Davis & Co.

The sale includes all the Colton apparatus, all the stocks and patents on capsule making machinery, all contracts for supplying the trade with empty gelatine capsules.

Plough, Inc., has purchased W. F. Gray & Co., Nashville, Tenn., manufacturers of Gray's Ointment. This product is one of the oldest proprietaries in the United States, having been first produced in 1820.

Purchase of the entire capital stock has been made by Plough, Inc., and payment will be made in cash out of the company's surplus.

McKesson & Robbins, Inc., plans the purchase of the outstanding capital stock of the Stewart & Holmes Drug Co. and the Colorado Wholesale Drug Co. it was revealed. The company has made application for listing 44,585 additional preferred and common shares on the New York Stock Exchange. Application was approved.

Lane Drug Stores net sales during August totaled $333,580 and net profits were $30,258. Both figures were larger than those for any preceding month this year.

Sharp & Dohme Earns at $1.86 Rate

Sharp & Dohme, Inc., reports for two months ended August 31, 1929, net profit of $246,982 after depreciation, federal taxes, etc., equivalent after allowing for dividend requirements for two months on 162,500 no-par shares of $3.50 preference stock, to 31 cents a share on 485,000 no-par shares of common stock now outstanding.

Income account for two months ended August 31, 1929, follows: Manufacturing profit $633,666; expense $344,399; operating profit $289,267; other income $14,429; total income $303,696; depreciation $7,109; federal taxes $33,679; other deductions $15,926; net profit $246,982.

Pro forma balance sheet of Sharp & Dohme, Inc. (old corporation) as of June 30, 1929, adjusted to give effect to acquisition to incorporation, recapitalization and financing incident thereto, shows:

Assets: Plant and equipment, after depreciation, $1,521,310; trade-marks, patents, copyrights, formulae and goodwill, $1; cash, $598,438; accounts and notes receivable, $1,078,572; inventories, $1,358,155; miscellaneous investments, $5,706; prepayments, $95,645; deferred charges, $100,788; total, $4,758,615.

Liabilities: Capital stock (represented by 162,500 no-par shares of $3.50 cumulative convertible preference stock, series A and 485,000 no-par shares of common stock), $4,000,000; accounts payable, $164,482; reserve for income taxes (current year), $75,473; initial surplus, $518,660; total, $4,758,615.

Wrigley Pharmaceutical Stopped

Wrigley Pharmaceutical Co. has been halted in stock sales by New Jersey court. The Attorney-General of New Jersey obtained a temporary restraining order against the makers of Spearmint Tooth Paste who sold stock for many years on the strength of the name "Wrigley."

The Attorney-General of New Jersey has charged in his complaint that the ostensible purpose of the Wrigley Pharmaceutical Co. was the manufacture of Spearmint Tooth Paste, actually, its purpose was to fraudulently avail itself of the trade-mark and good will of the William Wrigley Jr. Co. of Chicago, manufacturers of chewing gum. To this end it managed to copyright a trade-mark featuring the words, "Spearmint Tooth Paste" appearing on a back-ground of red and broad single arrow with the name Wrigley printed in bold, green letters over it. This was almost identical with the famous William Wrigley, Jr. chewing gum trade-mark, but was granted in spite of the objection of William Wrigley Jr. Co.

There is no record of any dividends having been paid to the stockholders by this corp. The capitalization of the company is 3,000,000 shares of stock authorized and it is believed practically all of this stock has been issued. Par value of stock is $1.00 per share.

Du Pont Viscoloid Co. announces that Leonard Bertoli, formerly sales manager, Fuller-Morrison Drug Co., Chicago, is appointed assistant to the director of sales, assigned to the promotion of Wholesale drug sales through the entire United States. Mr. Bertoli's work will be in co-operation with all district managers and salesmen. His headquarters will be in New York.

H. K. Stroud, account executive of Hanff-Metzger, Inc., New York advertising agency, has been elected a vice-president of McKesson & Robbins, Inc., Bridgeport, Conn. He will continue with Hanff-Metzger, Inc.

Arthur Colton Co., Detroit, have developed a tube filling machine which they state is capable of operating at a speed of 100 tubes filled per minute. It is stated, furthermore, that the machine has been operated up to 140 tubes filled per minute.

Continental Can Co. Merging with Owens-Illinois Company

A consolidation of the interests of Continental Can Co. and the Owens-Illinois Co. has been approved by the boards of directors of both companies. The plan of reorganization of the capital structure as passed by the boards of directors of both companies calls for the formation of a new corporation. Continental Containers, Inc., which is to be a holding company in the container field.

The new company will have a capital of 5,000,000 shares of no par common stock and these shares are to be exchanged with the holders of the common stock of both companies. Details of the actual transfer are being worked out by committees appointed for the purpose and a further announcement will shortly be made. The proposed plan will become effective of two-thirds of the common shares of each company vote in its favor.

It is believed that the offer to stockholders will be underwritten by Goldman Sachs & Co. and Charles D. Barney & Co. representing Continental Can Co., and by Continental Illinois Bank & Trust Co., Chicago, and other interests representing the Owens-Illinois Co.

New Incorporations

Paris Laboratories, New York. Toilet Articles. Capital $20,000. L. H. Solomon, 200 Fifth Ave., N. Y. C.

Lotus Products Corp., Wilmington, Del. Toilet preparations. Capital 10,000 shares common. Corporation Service Co., Wilmington, Del

I. B. S. Chemical Corp., New York. Delaware Charter. Capital $300,000. Joseph Harris, Wilmington, Del.

American Drug Stores, Inc., Clarendon, Va. Delaware charter. Capital $500,000, 50,000 shares common. American Guaranty & Trust Co., Wilmington, Del.

Decapo Chemical Corp., Brooklyn, N. Y. Delaware charter. Capital $100,000, 6,000 shares common. United States Corp. Co., Wilmington, Del.

Picot Laboratories, Inc., Wilmington, Del. Proprietary medicines. Capital $210,000. Oscar A. Villafane, Wilmington, Del.

Kure-Well Pharmacal Laboratories, New York. Chemicals. Capital $10,000. A. I. Levenson, 135 Delancey St., N. Y. C.

Jeanette Powder Puffs, Inc., Jersey City, N. J. Manufacture powder puffs. Capital 200 shares common. Barison & Barison, Jersey City, N. J.

General Laboratories, Inc., Wilmington, Del. Drugs. Capital $500,000. Corporation Trust Co. of America, Wilmington, Del.

Sanitol Chemical Products Corp., New York. Capital 100 shares common. L. Busell, 11 West 42nd St., N. Y. C.

Cherlax Corp., Elizabeth, N. J. Manufacture drugs, etc. Capital 98,500 pf $10 par, 15,000 shares common $50 par. Filer not given.

Drug Trade Industries Corp., Wilmington, Del. Stocks, bonds. Capital $100,000, 50,000 shares common. Corporation Trust Co. of America, Wilmington, Del.

Bo-Art Co., New York. Toilet articles. Capital $10,000. L. R. Bassman, 11 West 42nd St., N. Y. C.

United Perfumes' Associates, Inc., Wilmington, Del. Perfumes, cosmetics. Capital $501,000. Corp. Service Co., Wilmington, Del.

Wilson's "999" Corp., New York. Delaware charter. Chemists, druggists. Capital $350,000. Registrar & Transfer Co., Wilmington, Del.

Ruth D. Maurer Corp., New York. Toilet goods. Capital $500,000 pf, 50,000 shares common. B. F. Spellman, 115 Broadway, N. Y. C.

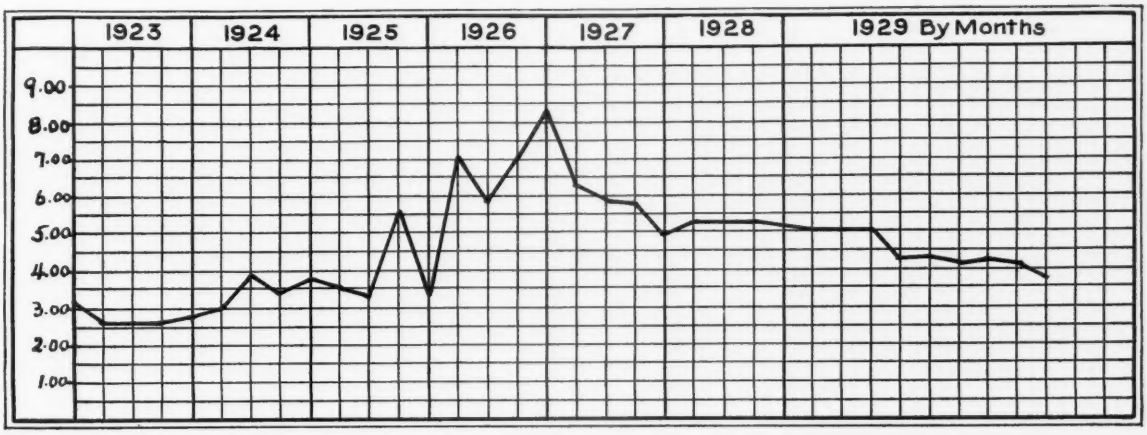
Ucoline Products Co., Wilmington, Del. Patent medicines. Capital 6,000 shares common. Corporation Trust Co. of America, Wilmington, Del.

The Concentrated Products Corp. of America, Wilmington, Del. Perfumes, incense, bath salts, toilet preparations. Capital 2,000 shares common. Corp. Service Co., Wilmington, Del.

Drug Industry Stocks

1929 Sept. 30th Bid	1929 Sept. 30th Asked	1929 High	1929 Low	1928 High	1928 Low	Sales in Sept.	Sales from Jan. 1, 1929 to Sept. 30th	ISSUES	Par $	Shares Listed	An. Rate	Earnings $-per share-$ 1928		1927
								NEW YORK STOCK EXCHANGE						
314½	316½	354½	241	252½	146	50,600	685,200	Allied Chemical	No	2,178,109	$6.00			10.03
168½	168½	184½	107½	117½	70½	752 300	11,132,100	American Can	25	2,473,998	3.00			4.11
138½	139	142	136½	147	136½	1,800	35,000	pfd	100	412,333	7.00			31.66
65½	66½	81⅛	46½	50¼	44	60,300	411,000	American Chicle	No	373,190	2.00	9 mo.	6.48	41.04
...	...	86	70½	114	107			pfd	No	33,200	7.00	9 mo.	42.13	6.78
43⅜	44	55	42⅛	55	43½	58,700	219,500	American Comm'l Alcohol	No	77,000	.....	3 mo.	2.66	
64⅜	65	85⅜	64	86	59	9,000	270,630	American Home Products	No	534,000	3.00	6 mo.	2.52	3.67
...	...	92½	56⅜	83½	70⅛		35,700	Certo Corp	No	300,000	3.00	9 mo.	5.19	3.87
16½	17	23⅛	12	36	20	18,120	167,500	Container Corp. Class A	20	271,189	1.20	9 mo.	1.46	2.26
7	7½	11⅛	6	19½	9¼	19,700	233,200	Container Corp. Class B	No	568,289	.60	9 mo.	0.73	1.13
86½	87	92	60	128⅜	53	409,600	3,481,200	Continental Can	No	*710,000	*5.00	8 mo.	7.61	7.21
...	...	126	124⅜	128	123		1,400	pfd	100	51,125	7.00	8 mo.	111.39	86.82
113	113½	118⅜	82	94	64⅜	261,000	1,610,600	Corn Products	25	2,530,000	2.00	9 mo.	3.00	3.50
140	140½	139⅜	144⅜	146½	138½	450	11,730	pfd	100	250,000	7.00	9 mo.	35.63	42.40
51	51⅛	82½	50⅜	89¼	62⅛	151,400	2,264,700	Coty, Inc	No	†327,762	†2.00	9 mo.	9.23	10.80
111	111⅜	126½	105	120⅛	80	92,800	734,000	Drug Incorporated	No	2,183,990	4.00	8 mo.	3.60	11.47
63⅜	65½	79½	62	84	64½	9,700	91,900	Household Products	No	575,000	‡4.00	6 mo.	2.64	5.22
17	18	23	12⅜	27½	13⅜	5,300	50,600	Kresge	10	3,678,720	‡1.60	9 mo.	2.76	3.76
74½	77	76	68⅜	118	110½	320	3,450	pfd	100	20,000	7.00	9 mo.	512.30	698.85
130	131	157½	127½	136⅜	79⅜	80,800	2,380,100	Lambert Co	No	571,906	$6.50	9 mo.	6.62	6.23
44	45	68⅛	40	64⅞	38	51,600	334,900	Lehn & Fink	No	295,000	3.00	6 mo.	3.25	4.32
46½	46¾	59	45⅛	50⅜	45½	18,600	2,757,700	McKesson & Robbins, Com	No	664,409	1.60	4 mo.	1.42	0.91
...	...	...	...	63⅜	54	4,200	120,300	pfd	50	315,086	3.50	4 mo.	4.15	8.94
65⅛	66⅜	72⅜	42⅛	190	117⅜	129,900	572,980	Mathieson Alkali	No	147,207	6.00	9 mo.	9.54	10.93
...	...	...	...	95⅞	74⅛	18,100	166,400	Owens-Illinois Glass Co	25	768,860	4.00	9 mo.	4.13	5.37
44⅜	45	87⅞	44⅜	56⅜	47¼	3,800	297,000	Park & Tilford	No	200,000	3.00	9 mo.	5.09	3.70
40	41	82⅛	40	91	52	500	3,250	Prophylactic Brush	No	100,000	‡4.00	6 mo.	2.47	6.18
...	...	...	...	...	...			Rossville Com'l Alcohol Corp	No	120,000	.....			
90	91	118½	90	...	...	38,200	919,800	Schulte	No	1,121,667	3.50	6 mo.	1.99	4.90
64	64½	65⅞	64	67½	35⅜		2,500	Sharp & Dohme, pfd		162,500	3.50			
11⅜	12⅛	22⅛	11⅜	23½	11⅜	3,900	142,400	Sweets Am	50	100,000	1.00	9 mo.	0.97	0.47
210	212	226⅛	128	138	102½	193,400	1,452,200	U. S. Ind Alc	No	240,000	6.00	6 mo.	3.90	7.26
...	...	...	...	125⅛	118⅜		880	pfd	100	60,000	7.00	6 mo.	19.12	36.03
6¾	7	13½	6¼	...	...	18,700	46,200	Vadsco Sales						
45	46	51⅜	43½	85	58	60,600	445,400	Vick Chemical Co	No	400,000	4.00		6.06	5.36
97	97½	103⅜	85	225⅜	175½	287,400	1,412,400	Woolworth, F. W	25	3,900,000	6.00			9.06
74	74½	80¼	70	84	68	10,000	159,500	Wrigley	No	1,800,000	‡3.50	9 mo.	4.38	5.43
								NEW YORK CURB						
30	35	37	31¾	28½	11⅜	1,500	174,100	Amer. Sol. & Chem. Corp., V.T.C.	No	160,000	.....		1.58	0.17
...	...	...	...	47¼	25¼	1,800	87,600	Con. Partic pfd	No	100,000	$3.00		4.00	3.17
186	190	210	140¼	...	...			Ches. Mfg. Co	25	120,000	.....			8.49
79	79¾	80⅛	63	92	75	11,700	67,900	Colgate-Palmolive-Peet Com	No		2.00			
...	...	55⅛	42	...	...	100	600	pfd	No		6.00			
...	...	...	...	57½	56	200	26,200	Davis Drug Stores Allot. Ctfs	No	100,000	.....	7 mo.	6.71	5.02
33	33½	34½	23	38⅜	23	18,900	34,100	Forhans	No	150,000	1.00		1.89	2.21
13	13⅛	20¼	13	...	...	5,300	53,500	Helena Rubenstein		135,000	.....			
...	...	...	...	23	7½	200	15,600	Heyden Chemical Corp	10	150,000	.....			1.02
...	...	...	...	...	...			May Drug Stores	No	200,000	1.50		1.38	1.82
64½	65	67	49	72	50½	3,500	32,000	Mead-Johnson	No	165,000	3.00	6 mo.	2.94	6.33
75¼	77	77¼	72½	98	38½	900	5,025	Monsanto Chemical	No	110,000	2.50	9 mo.	6.30	6.11
...	...	12	2	28½	10½	200	4,120	Nauheim Pharmacies Com	No	90,000	.....			3.03
...	...	30⅜	10	37⅛	20½	300	5,610	pfd	No	45,000	2.50			8.56
50	52	58¼	44½	55	38	2,500	39,506	Parke Davis & Co	No	4,747,829	1.00		1.73	1.54
89	91⅞	94	74¼	91	48	3,200	45,550	Peoples Drug Store	No	122,250	1.00			3.31
...	...	97⅛	81½	300	247		27,325	Proctor & Gamble	20	1,250,000	8.00		11.96	11.38
...	...	...	...	...	...	307,400	307,400	Standard Brands, Inc						
18½	20	22½	15½	...	...	16,600	58,100	Stein Cosmetics						
96	97½	107¾	71½	102½	37½	24,500	181,400	Walgreen Co. Com	No	766,354	.....	9 mo.	2.17	1.59
30½	31	44¼	30	48¾	27	22,200	170,900	Zonite Products Corp	No	176,000	.....		6 mo.	0.98
								CLEVELAND						
...	...	460	200	112½	25	680	1,748	Dow Chem. Co	No	120,000	6.00			
...	...	107½	104½	107	103¾	220	698	pfd	100	30,000	7.00			
...	...	42	20	30	24		11,355	Miller Wholesale Drug Com	No	17,000	1.60			
...	...	24	15	24	21½	630	13,534	Weinberger Drug, Com	No	20,000	.....	9 mo.	3.51	1.35
								CHICAGO						
41	42	52	39	...	...	1,750	36,550	Abbott Laboratories	No	120,000	2.00			
...	...	29½	12	31½	21½	11,850	88,995	Lane Drug Co., Com	No	90,000	.....	7 mo.	1.47	3.13
...	...	32	18	51⅜	23	1,450	34,260	Cum. pfd	No	65,000	.....	7 mo.	3.20	6.34
								CINCINNATI						
...	...	41½	20¼	...	...	1,574	5,600	Dow Drug Co	No	90,000	1.00			
...	...	...	...	...	...			pfd	100	4,000	7.00			
								UNLISTED						
...	...	...	...	...	...			Heyden Chemical Corp., pfd	100	3,100	7.00			56.18
81	86	...	...	...	...			Merck Pfd	100	33,950	5.00			
...	...	...	...	...	...			Mulford, H. K. & Co	100	30,154	3.00			
...	...	...	...	...	...			Noxzema Chem. Co			.....			
...	...	...	...	...	...			Squibb Com	No	411,778	.....			1.69
...	...	...	...	...	...			pfd	No	63,888	6.00			16.92

*Before giving effect to 100% stock dividend.
†Before giving effect to 300% stock dividend.
‡Includes extras.



Prices of Bergamot Oil. Dollars per pound.

Is Bergamot Oil at a Price Below its Value?

Quoted at the lowest price in more than four years, bergamot is attracting many buyers. However, a study of the actual conditions surrounding this oil are of extreme importance in estimating the future market trends.

BERGAMOT oil is to-day low in price. And it is being offered for contract over next year at still lower prices. The prices at which the oil is being offered on contract are the lowest prices that have been quoted in more than five years. Just why the price is so low and whether it will go lower or advance depend upon many factors.

In the first place, bergamot oil is produced from a tree that is indiginous to only one small part of one country of the entire world. That place is Reggio Calabria in Italy. The tree is not hardy even when it is grafted on other specimens to increase its resistance to the elements. Excessive dust from the roads gathering on the leaves of the bergamot tree will seriously affect the tree. Wind and rain storms as well as untimely cold weather work havoc with the bergamot and with the production of oil than can be anticipated.

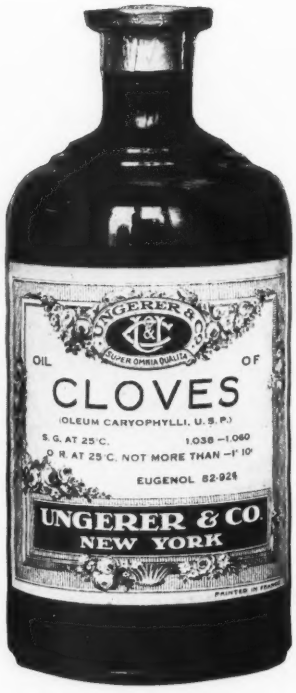
Consequently, the producers of bergamot oil would much rather turn their attention to other products such as lemon and orange oils if they cannot get a high enough price for the bergamot oil to repay them for the additional labor and risk involved in bergamot cultivation and production. Bergamot must sell well above lemon and orange oils or else it is a losing proposition. Lately bergamot oil has been selling at price quite close to the prices quoted for lemon and orange oils. It is quite true that lemon and orange oils have been priced for some time at levels which may properly be considered abnormal, but, nevertheless, the producers of bergamot oil are quite disgusted with the conditions that now prevail in the market.

It has been quite properly stated that the cause of the present weak market for bergamot is the lessened world demand for bergamot oil. However, the United States has not decreased its importations of the oil

The Significance of a Label

UNGERER LABELS carry as full and complete chemical and physical specifications of the products sold under them as is practical. The label is a guarantee that the product meets those specifications and further that it is pure and of the finest quality.

¶ That the house of Ungerer has the confidence of the largest purchasers of essential oils, perfume and flavoring materials is tacit recognition of their high standing, and signifies definite approval of their policy of uncompromising maintenance of quality.



"Our Quality is Always Higher Than Our Price"

UNGERER & COMPANY
NEW YORK

to any marked extent as a study of the following table of imports will immediately reveal:

Imports of Bergamot Oil

		Pounds	*Value*
1922		35,682	$104,824
1923		108,704	273,799
1924		72,213	231,132
1925		116,336	403,194
1926		75,937	418,186
1927		104,000	628,079
1928		99,982	505,841
1929	6 months	55,605	283,576

These figures plainly show that during the current year this country intends to consume more bergamot oil than was consumed here last year. The figures also show that the imports of the various years has quite consistently followed the path of a year of lean imports followed by a year of heavy imports.

But while the imports into this country have been rather consistent, the total exports from Reggio Calabria have declined very sharply. For, while in 1925 exports from Reggio Calabria totaled more than 330,000 kilos net weight, this figure has since declined to a level of 170,000 kilos for 1926; and approximately 190,000 kilos for 1927 and 1928. Thus within a period of three years the exports of this oil from the only point of production has almost been cut in half. Is it any wonder that the market is weak and quotations are sharply lower ?

Getting Along With Less Bergamot

To appreciate fully why the rest of the world has been able to get along with much less bergamot oil, one must appreciate the position of bergamot oil immediately following the war when the handfull of Calbrian producers were able to fix their prices in arbitrary fashion due to the excellent demand. At that time the producers of the oil were not satisfied with a normal profit, but exploited the market to an abnormal degree.

This attitude with regard to price was extremely annoying to the foreign consumers as they could not base the costs of their products containing bergamot oil on any definite basis. This state of conditions naturally resulted in a search for substitutes for the oil with the result that the present world market for the oil is considerably smaller than it previously was.

Demand Down, Production Up

The decreasing demand was accompanied on the part of the producers by increased planting of trees. This was due to the fact that a few years back, the importation of oil into this country came under strict investigation so that it became necessary to put more real bergamot oil into the cans to have the shipments of oil pass the Food, Drug & Insecticide Administration regulations. Now these young trees are beginning to bear fruit with the result that an increasing amount of bergamot oil is available at a time when the demand is greatly diminished.

It is probably natural that, at a time such as this, the producers of the oil should rush to the Italian Government and ask them to form a co-operative to properly market the oil. However, the many producers of bergamot oil who are wealthy are not as anxious to form a co-operative as are the weak producers.

With reference to the formation of a co-operative among the bergamot oil producers we quote the following from a letter to the "Perfumery and Essential Oil Review," London:

"Latest news from Calabria reporting about meetings held in the presence of Government representatives, gives one the impression that the sponsors of the idea of forming a co-operative have scored a success and that authorities in the provinces are viewing the proposal in a favourable light. However, the opinions as to the practical application of the scheme are widely different and are just as numerous as they have been hitherto. Whilst some of the producers would be perfectly satisfied with a certain minimum price fixed and guaranteed by the co-operative, others are prone to adopt an aggressive policy by exploiting the monopoly for the achievement of their own ends in the shape of an immediate advance of prices.

Utopian Policy

"The latter view is also held by some of the provincial Government representatives. There is nothing surprising in the fact that authorities who are generally devoid of an intimate business knowledge, should encourage this sort of thing. However, it is astonishing to note that business men should favour such a utopian policy.

"What is the use of having a monopoly and stabilised high prices if the co-operative cannot dispose of the oil which they are forced to accept from the producers ? There would also crop up the question as to whether the co-operative would be obliged to take over the 400,000 lbs. of oil which producers have still on hand.

"The basic idea advanced by the commercial sponsors of the scheme is that the co-operative should guarantee them a minimum price for their oil; in other words, their intention in establishing this institution financed by the Government, is to use same as a dumping ground for their oil and to free themselves of all worries in connection with the disposal of their products. How and at what rates the co-operatives are supposed to sell the merchandise are questions in respect of which great silence has prevailed so far. If it comes to the worst it is hoped that the State will advance its millions for the upkeep of this utopian scheme.

"By using slogans, such as 'Increase of the National Wealth,' 'Exploitation of the Monopoly for the Furtherance of Export,' &c., attempts are made to present the whole matter to the heads of the Govern-

MANY manufacturers have come to know that their goods are more frequently trade-marked by odor than is generally appreciated. The first impulse on the part of the prospective buyer who picks up a cake of soap or package of talcum is to smell it. If the odor appeals, the merits of the article have a chance to be recognized. However, should the odor be unpleasant, the examination generally goes no further.

Perfumes can be added to many articles which are ordinarily quite odorless and such addition adds sales value and appeal to the product.

Leaders in various industries are endeavoring to improve their products in regards to odor. Lacquer manufacturers, tanners, producers of leather, laundry soaps, rubber goods, paper, wall finishes, cork linoleum, fly sprays, etc., all can make use of perfumes. Lately scientific principles have been brought into play which now permit odoriferous materials to be combined to obtain a desired effect at a minimum cost.

SPECIAL PERFUMES

for

Bath Salts
Face Creams
Liquid Soaps
Toilet Soaps
Face Powders
Talcum Powders
Paradichlorobenzene Blocks
Hair Pomades
Insecticides
Theatre Sprays
Paper

Practically every manufacturer is accustomed to calling in Experts for advice concerning his advertising, packaging, style and many other appeals to the sense of sight. He needs advice no less in matters concerning sense of smell.

The full facilities of our Perfume Research Division are at your disposal and we suggest that you place your problem before us.

FRITZSCHE BROTHERS, INC.

78-80-82-84 Beekman Street, New York, N. Y.

Sole Agents in the United States and Canada for

SCHIMMEL & COMPANY, LTD.
Miltitz near Leipzig
Germany

ment in a favourable light, without, however, drawing their attention to the numerous drawbacks which such a scheme would necessarily entail.

"How difficult it is to create a monopoly with a judicious administration for the sale of a commercial article and what an enormous capital is required to ensure the success of such an enterprise, has been seen from the control exercised over the sale of citrate of lime. A monopoly for bergamot oil would be even infinitely more difficult, because unlike citrate of lime, the article in question is of a perishable nature and will oxidise sooner or later if stored for a certain time. It is also a well-known fact that the administration of a Government institution leaves a lot to be desired with regard to the careful handling of goods and is never the same as in the case of private owners who have to bear all losses caused by the negligent treatment of their article. Besides, bergamot oil has so many subtle differences in quality according to the district where the fruit was grown and the time of the year when the oil was pressed that the unwieldy working of the administrative machinery of a Government co-operative, which can never adapt itself so easily to the needs of free trade, will never be able to do justice to the requirements of pressers as well as buyers.

Bergamot Oil a Luxury

"Bergamot oil is and always has been an article of luxury which is not absolutely essential for the necessities of daily life. During the last years, experience has shown that as soon as prices were high, buyers invariably curtailed their consumption of the oil and that they entirely withdrew from the market when the price reached a certain limit. Under those circumstances buyers preferred to resort to substitutes and if in the course of the last few years the consumption of bergamot oil has considerably declined, it is entirely the fault of producers whose unscrupulous tactics and exaggerated prices have to a certain degree compelled foreign buyers to look for substitutes.

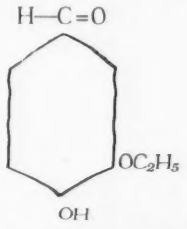
"The only way to relieve the prevailing situation would be for peasants to reconcile themselves to the present conditions, the more so as they have had a period of prosperous years. With low prices, which should be kept steady as much as possible, and with the delivery of *pure* qualities, buyers would be gradually induced to increase the consumption of bergamot oil, thus enabling producers after a certain lapse of time to obtain more advantageous prices. Provided that producers will not revert to the arbitrary rule of the market, thus causing violent price fluctuations, and refrain even from the slightest adulteration of their oils, their present position will undoubtedly change for the better in the future."

However, it is a fact that consumers in this country are buying bergamot oil over next year quite heavily at to-day's contract prices. While the price may go lower, these consumers are covering at least a goodly portion of their requirements. But what goes on in this country might not affect the situation at all since it was the decline in buying in other countries that caused the weak position. If the other large consuming countries react favorably to the low prices and reject their substitutes to a large extent, the market may easily be placed in a firm position and to-day's prices may become the low of the year ahead. However, this is purely speculative and depends upon unknown factors. There is one fact that cannot be denied, and that is that any user of bergamot can well afford to cover a large percentage of his requirements at existing prices and save money on his purchases in comparison with the prices he paid during the past few years.

New Ethyl Vanillin

A new ethyl vanillin is being marketed under the trade name, "Vanethal." The product is ethyl protocatechuic aldehyde of the formula $C_9H_{10}O_3$, having a molecular weight of 166.1. The congealing point is 76.05 to 76.2° C., and melting point 77 to 78° C. The congealing point determination is preferred to the melting point because of greater accuracy.

The structural formula of Vanethal is:



This product is chemically closely related to vanillin in the same way as, for instance, ethyl alcohol is related to methyl alcohol. Vanethal is the ethyl ether and vanillin the methyl ether of the same mother substance—protocatechuic aldehyde.

Both vanethal and vanillin have the characteristic odor and flavor of the vanilla bean. Vanethal, however, is of greater strength and has a finer aroma. It is approximately three times as strong as vanillin and it approaches more closely the subtle fragrance of the best grade of vanilla bean. Vanethal is made synthetically from guethol, a compound very similar to guaicol. It may also be made from safrol, a compound usually obtained from camphor oil.

A surprisingly faint vanilla odor is exhibited by solid Vanethal due its high of purity. Only in proper dilution are its strength and true aroma apparent.

Vanethal is used in exactly the same way as vanillin for flavoring, but approximately one-third the amount of vanillin used is required. For full strength vanilla extract imitation (1% Vanethal) suitable solvents are 20% alcohol or 40% glycerin. Glucose syrup is unsatisfactory since the degree of solubility of Vanethal in the latter is insufficient.

Solubility of Vanethal:

Alcohol	1 to 5 parts
Glyco Ester	1 to 5 parts
Glycerin	1 to 40 parts
Water	1 to 250 parts

Vanethal is the product of Chas. Pfizer & Co., Inc., New York.

SPECIAL ODORS FOR

CREAM
PERFUME
BATH SALTS
FACE POWDER
LIQUID SOAP
TOILET WATER
TALCUM POWDER
INSECTICIDE SPRAYS
DEODORIZING BLOCKS

Fragrant---powerful---lasting odors, made entirely from products of our own manufacture. Odors to meet your individual requirements.

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Trade GIVAUDAN SYNTHETICS DELAWANNA Mark

Pioneer Manufacturers of Synthetic Aromatic Chemicals in America

GIVAUDAN-DELAWANNA, Inc.
101 Fifth Avenue, New York, N. Y.

Rose-geranium plants and flowers being transported to a distillery in Northern Africa.

PERFUME FLOWERS *of* NORTHERN AFRICA

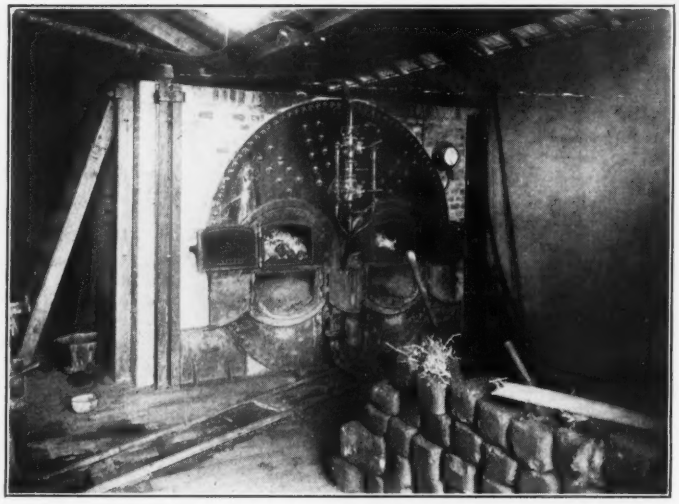
THE climate and soil of Northern Africa are eminently favorable to the cultivation of perfume-flower plants, and in certain quarters it is a matter of great surprise that not more attention is paid to their cultivation. In fact, the growing of perfume-flower plants, at the present time, in Northern Africa, is in the hands of only a few distilling perfumers.

Futhermore, the cultures of interest to-day date back to 1852, when the section in and near Cheragas, in Algeria, known as the Sahel, d'Alger, fostered the cultivation of the geranium, petit-grain, neroli bigarade, lemon, cedrate, bergamot, the rose and the jasmine, as well as lavender. But it was about 1857 that a great deal of interest was developed, and from that time on the cultivation of perfume-flower plants developed rapidly. In fact, in 1878, according to statistics of the period, approximately 500 hectares were under cultivation. There were, however, some failures, above all in the provinces of Oran and of Constantine, and it was in the department of Alger that success of a tangible sort attended the efforts expended along these lines.

Constant reminders are given the French by articles that they should aid in developing their colonies. Naturally, perfume flower plants are not neglected, and one finds in various French publications, articles on why French colonies, because of the climatic conditions, are so favorable to cultivation of flowers of use to distilling perfumers. An article applied to Algeria appeared in our September issue. This article on Northern Africa has been translated from a French industrial daily --- "La Journee Industrielle".

The rose-geranium, fragrant in its branches and flowers, is in the lead at the present time. Although the essential oil taken from the rose-geranium has not the subtle and delicate perfume of the rose, the quantity makes up for the lack in quality, and

it is in the lower Mitidja that the distilling perfumers secure large supplies. Alone in the regions of Arba, Ravigo, Chebli, Boufarik, Blida, la Chiffa, Mouzaiaville, El Affroun, Oued el Alleug, the geranium is grown upon an area covering about 3,140 hectares. In 1927 the producers of rose-geranium essential oil, getting together on a co-operative basis, released 45,854 kilograms of oil, representing more than half of the total production in Algeria, the figure for the total production for that year being 85,600 kilograms.



Residue of Rose-geranium plants and flowers being taken care of by a firm of distilling perfumers in Northern Africa.

According to figures at hand, the product pays a good profit, particularly during the past few years. In 1914, the kilogram was valued at 35 francs for this product. In 1925, 1926, 1927, 170 francs on the average, attaining in February 1929 approximately 240-245 francs F. O. B. Algiers for available stocks, and 235-240 francs, depending upon quality, for futures, to be delivered in May and June.

With l'Ile de la Reunion, which exported in 1926, for example, up to 148,141 kilograms of essential oil, the department is the big producer for the world, principally France, Germany, Great Britain and the United States.

The results achieved are appreciable, but they would be even more so if the growers did not find themselves up against it with respect to the gathering, which, at the present time, may be accomplished only with the aid of the sickle and the pruning-shears, and which is aggravated by the difficulty of securing competent labor

Following the rose-geranium in importance is the so-called "rose à parfum," or perfume-rose, which is being very successfully grown particularly in Morocco. The natives of Algeria years ago used to cultivate the *rosa moschata*. The Europeans accorded their preference to the *rosa centifolia*, but they have not carried their experiments very far, and the rose plantations of Algeria are, therefore, resting practically stationary.

In Morocco experiments have been undertaken at Meknes and at Marrakech. The rose-tree bearing the name of the latter town overshadows all the others. It is a shrub forming tufts of 1 to 2 meters high, and about the same in diameter, with flowers of either light pink or a pale rose color, tinged with yellow at the base of the petal. They produce from the beginning of April to the last of May from 500 to 700 roses weighing 1 kilogram to 1 kilogram 500 grammes, whereas the roses of Hay and the roses of Grasse, according to experiments carried on by the agricultural service, gave a yield of many as 2,800 kilograms of flowers per hectare. For these varieties it required from 7,270 kilograms to 8,835 kilograms in order to extract one kilogram of oil, and under these conditions we cannot be surprised at the prices attained by this product, not so fine in quality as that secured from the rose of Grasse, but quite superior in strength to that which is given by the rose of Bulgaria.

The value in 1923 of essential oil of rose was put at 4,000 francs. It is certain, however, that with equipment for distillation that is more modern than that employed at Marrakech, far greater results could be secured.

In this connection, one has only to cite the bitter orange tree, or *bigaradier*, cantoned in Algeria at Boufarik, and from which the essential oil known as neroli is secured. One thousand kilograms of the flowers produces one kilogram of essential oil, and, in 1927, Algeria exported 240 kilograms of it, valued at 720,000 francs.

The production in Tunis is interesting: 100 kilograms of essential oil of neroli, annually, without forgetting the some 50,000 liters of orange flower water, the so-called bigarade oranges green giving in addition their dried rind for use by the distilling perfumers, furnishing what is known as the bigarade essential oil of neroli.

It is in the vicinity of Fez and of Marrakech that one finds this tree in Morocco. The production is a variable, but it would certainly see a substantial increase if these fine trees were trimmed and cared for.

The Algerian agriculturists have undertaken the cultivation of lavender in the Sahel of Algiers, at Chaiffa, at Miliana, as well as at other diverse spots of the departments of Constantine and of Oran. With the mountainous districts favorable to the cultivation of this perfume-flower plant, the yield from the flowers may attain a figure of 2,500 kilograms per hectare, it being possible to secure 20 to 25 kilograms of essential oil on this basis, with an average value of 200 francs per kilogram.

An attempt is being made to introduce lavender in Morocco. So far, the experiment at Fez has not suc-

ceeded. At Casablanca the plant has disappeared. At Rabat its development has been meager.

There are, however, other perfume-flower plants that thrive in Northern Africa, habitat entirely suited to their peculiarities. Let us cite, for example, the thyme, for which Morocco seems very favorable; the jasmine, cultivated for a number of years by the natives of Algeria, and which, in Morocco, produces plants able to attain a height of 5 to 6 meters; iris, mint, rue, eucalyptus, and above all the sweet marjoram. Vast plantations of this latter plant exist in the vicinity of Sfax, which produce, depending upon the amount of rain, from 30,000 to 65,000 kilograms of dry leaves, sold in 1928 for a price of from 425 to 450 francs the hundred kilograms. The annual production varying from 500 to 700 tons, this product has proved itself an interesting one for the protectorate.

In Morocco the cultivation of sweet marjoram is as easy and as dependable as in Tunis. In Chaouia, 40 hectares have been set aside for it, and as irrigation is not necessary to the district, making it possible to grow it without any complications setting in, it should be interesting for those who care to develop this well-paying culture.

As one sees from the foregoing, and as so thoroughly pointed out recently by Mr. Edouard Payen in a remarkable study of this subject in the *Bulletin du Comité de l'Afrique Francaise*, the perfume-flower plant industry, as applied to Northern Africa, because of the unusually good conditions existing in this part of the world, should be developed to the extent which it deserves.

The Mixing Equipment Co. Inc., 229 E. 38 st., New York, announce that "Lightnin" mixers are now being manufactured in their new plant at 1024-1058 Garson ave., Rochester.

The new plant of concrete and steel construction comprises a ground floor space of 18,000 square ft. situated on a plot of ground 170 x 300. The building is 60 x 300 ft. and is so designed that additional stories may be added as requirements demand. It is a most modern plant in every way, a combination oil or coal burning power and heating plant, sanitary drinking fountains, rest rooms, individual lockers, well ventilated with special care given to the comfort and well being of all employees.

The present New York offices will be maintained, although the main office will be located at the Rochester plant. It is expected that service branches will be established in Chicago, San Francisco, and Atlanta, carrying an adequate stock of "Lightnin" mixers at these points.

A complete new catalogue will soon be available describing fully the many sizes and types of "Lightnin" mixers.

Landon Williams, of Montgomery, Alabama, has received the gold medal established by Lehn and Fink, Inc. for excellent work in pharmacy. The annual award was presented by the Alabama Polytechnic Institute, at Auburn, Alabama.

This medal is one of a number of similar annual awards founded by Lehn and Fink, Inc. to stimulate interest in the study of pharmaceutical products

The Federal Trade Commission has dismissed a complaint against the Pepsodent Co. of Chicago, manufacturers of dentifrices, charging several forms of resale price maintenance.

Burt Goddin with Euro-American Corp.

Burt H. Goddin has been elected vice-president and director of The Euro-American Corp., Newark, N. J., and New York, and will direct the sales activities of the company with a program of expansion. Mr. Goddin has had twenty-five years experience in the drug and chemical industry during which time he was connected with Roessler & Hasslacher Chemical Co., Powers-Weightman-Rosengarten Co., succeeded by Merck & Co., and Hoffman-LaRoche as general sales manager.

The Euro-American Corp., which is sole representative in United States and Canada for Metzner & Otto, Liepzig, Germany, manufacturers for 70 years of an extensive line of chemical products, will maintain executive offices and laboratories at 125-135 N.J.R.R. ave., Newark, N. J., and a sales office in New York, at 52 Beekman st.

Essential Oil of Garden Pink

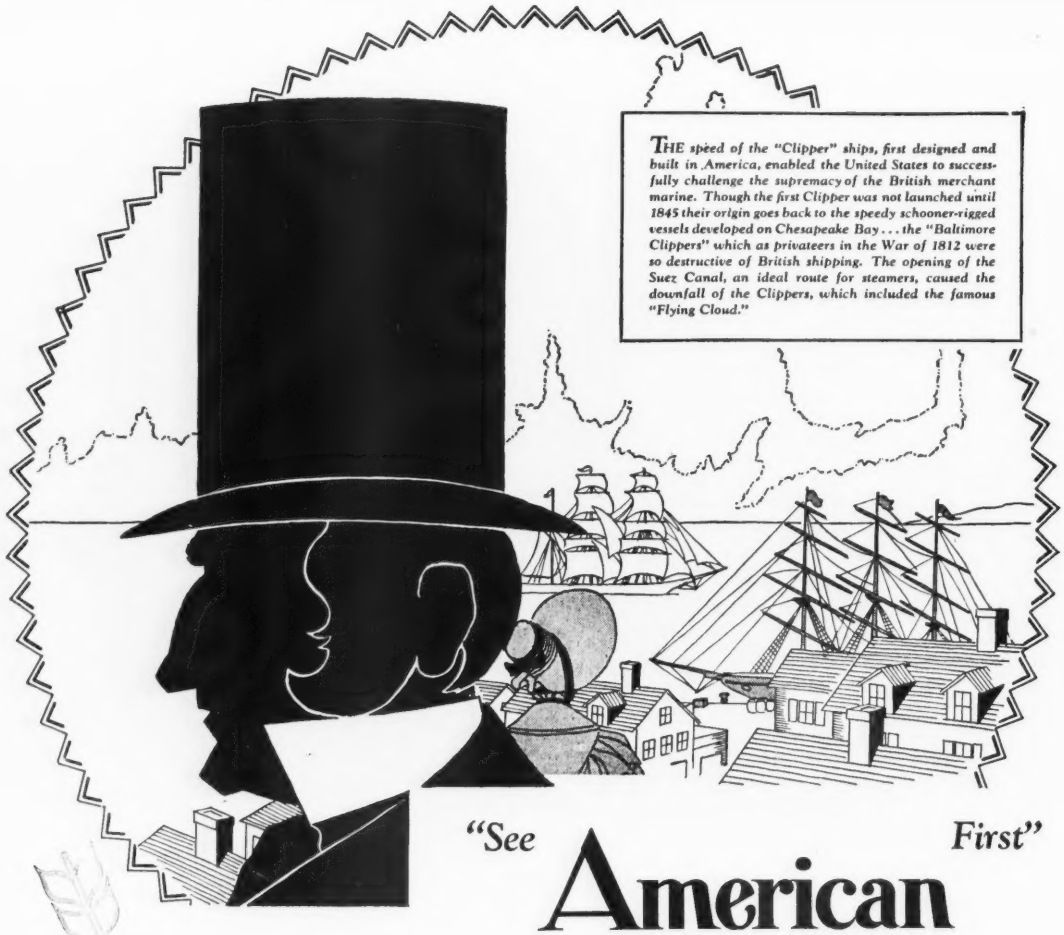
The blossoms of the flower, garden pink, known as Dianthus caryophyllus L, have been extracted to yield an essential oil at a yield of 0.0432%. The density of this oil at 15°C. is 1.0375. The composition of this oil has been found to be as follows:

The first step in the treatment of the oil consisted in the removal of small amounts of aldehydes and acids, which was accomplished by shaking the oil with sodium bisulphite and sodium bicarbonate. The phenolic constituents were isolated by means of cold 3% and 10% solutions of sodium hydroxide. A small amount of methyl salicylate was found in the extract, the presence of the salicylate being determined by hydrolysis with a 25% solution of sodium hydroxide. On the other hand distillation of the remaining phenolic fraction yielded principally eugenol.

Phthalic anhydride was used as an esterifying agent in the separation of the primary alcohols which were present in the ethereal extract of the alkaline solution, as obtained above. The esterification takes place after preliminary neutralization. When the phthalates that were obtained in this manner were hydrolyzed, phenyl-ethyl alcohol along with a trace of an unsaturated alcohol, which is likely terpene, was mainly obtained. That part of the ester fraction which did not react with the phthalic anhydride was freed from traces of ketones by the addition of semicarbazide acetate. When it was hydrolyzed, it yielded a mixture of benzoic and salicylic acids (8.1) and benzyl alcohol, together with a trace of an unsaturated terpene alcohol. The extract was determined to have the following composition:—eugenol 30%, phenyl-ethyl alcohol 7%, benzyl benzoate 40%, benzyl salicylate 5%, methyl salicylate 1% and unidentified material 17%. W. Treff and H. Wittrisch, Journ. prak. Chemie, 1929, series ii, volume 122, pages 332-339.

Determination of Geraniol in Citronella

When citronella is acetylated under ordinary conditions, only the diacetate is obtained. The errors and disagreements that are obtained in the analysis of citronella oil are assigned to the presence of water and sulphuric acid in the reagents. It is also assigned to variations in the concentration of the alcoholic alkali solutions which are used in the analysis. That portion of the oil which is capable of being acetylated may be determined within about 2% from the difference between the esterification numbers of the original and the acetylated oils. J. Zimmermann, Chem. Weekblad, 1929, volume 26, pages 389-91.



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Synthetic Aromatics--

Anisic Aldehyde or Aubépine

THERE is no more interesting subject for the manufacturing perfumer than that of synthetic aromatics, their character and use. In fact, the appearance of several extensive works on the subject recently in France prompts the idea of giving to the manufacturing perfumers of America a series of articles on synthetic aromatics, drawn directly from authenticated sources for the readers of DRUG MARKETS. The formulas given are those of men who have worked as accredited chemists in France and other countries, but, naturally, it must be understood that they are not quoted as representing the last word, by any means. They will, however, serve as a basis for useful and practical experimentation in the ever broadening field of synthetic aromatics, and should be regarded in this light.

The history of synthetic aromatics is an old story and need not be gone into at length in this, the first part of the series. It will, however, not be amiss to state that the growth of this important industry has been tremendous since the war. This does not mean that the industry in countries like France, which still claims the lead, was not already large before 1918, but it is acceptable as fact that during the past ten years the use of synthetic aromatics has increased upon a scale which may be considered phenomenal. Everyone in the trade knowns of the fears held by the natural flower oil section of the industry when the widespread use of synthetic aromatics had to be faced. Many thought that the natural flower oils would simply pass out of existence, but to-day those very same persons know that the introduction of synthetic aromatics has simply meant an increase in the use of perfumes, due to a lowering of production costs. Furthermore, there is an indefinable something which the wholly synthetic or artificial perfume fails to give, so that natural flower oils are still in demand. In fact, synthetic aromatics have, in a number of instances, increased the demand for natural flower oils, because more perfumes are being used by the world public at the present time than ever before in the history of the human race.

One of the most important groups of synthetic aromatics is that known as the aldehydes, and among the aldehydes one of the more commonly used is that known as anisic aldehyde, or aubépine, the subject of this article. As the trade knows, anisic aldehyde is taken from various sources, but we will take into consideration only that product which comes from a treatment of anethol.

Anisic aldehyde is very widely employed among manufacturers of perfumes and soaps, for the reason that it produces perfumes of great fixity and of pleasant or agreeable odor. For some it represents the artificial hawthorn (*aubépine* = hawthorn), for others it is synthetic acacia. At any rate, anisic aldehyde is a constituent of *badiane*, anise, and may be produced by the action of hypochlorites, of nitric acid or of a chromic mixture on anethol, which has the odor and taste of pure anise. One mixes, for example, one part anethol with two parts acetic anhydride, according to Gattefossé. This is heated, and then there are added three and one-half parts of nitric acid 1,107. The usual purifying process by the so-called bisulphite method follows, as worked out by the individual manufacturer to suit his particular requirements.

The use of anisic aldehyde, as already stated, is extensive, employed as it is in combination with oil of petit-grain and orange, phenylethyl alcohol, etc. In fact, it is an invaluable synthetic aromatic and produces some very interesting and tangible results. Exposed to the air, however, anisic aldehyde rapidly oxidates, and is transformed into anisic acid. In addition to this it must be carefully protected against the light for the same reason, and it should, therefore, be kept in a dark place in bottles well filled and securely corked, or stoppered.

In a work which has just appeared in France, Mr. Henri Fouquet, technical advisor, gives the results of over thirty years of experimenting in the field of the manufacturing perfumer. About 75 pages of his book, "La Technique Moderne et Les Formules de la Parfumerie", published by the Librairie Polytechnique Ch. Béranger, Paris and Liége, deals with synthetic aromatics and artificial perfumes. He gives a table in this section which is very interesting, based as it is upon his own personal investigations. In connection with anisic aldehyde he offers the following:

Density at *One may dissolve cold in 1 kilogram*

+15° C.	*Alcohol*					
at	95°	70°	50°	*Oil*	*Mineral Oil*	*Vaseline*
1,128	500	450	80	70	8	30

The density is taken at +15°C. Figures applying to solubility are not given as being mathematically

(*Continued on page 378*)

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Market FACTS *From* GRASSE

- ¶ Low Jasmine prices extended for twenty days more.
- ¶ Downward revision of Lavender prices anticipated.
- ¶ Small Tuberose crop not expected to bring high prices.
- ¶ Clary Sage production greatly stimulated by demand.
- ¶ Rose-Geranium yield small.

By O. C. Zilisch

Our Grasse Correspondent

JASMINE gathering is approaching the final period, which may extend into the last days of October, depending upon the weather. As stated in our report for August, the price paid the growers this year was established at 15 francs per kilogram, two francs less than the growers were paid last year. This price was originally set by the perfumers' syndicate as applying to the yield up to and including September 20, at which date the future price to be paid the growers was to be established. In accordance with this procedure, the original price of 15 francs per kilogram was extended to include the yield from September 20th to October 10. If conditions are such that the gathering of the jasmine flower can be profitably continued beyond October 10th then the matter of price will be adjusted to meet the requirements. In this connection, it should be stated that, naturally, the jasmine flowers gathered after the last days of September are, as a rule, not as satisfactory for the distilling perfumer as those gathered during the first part of the season. Some of the distilling perfumers prefer not to handle the final gatherings, unless the quality of the flowers is up to what they regard as a practical standard. The jasmine crop of last year ended on October 10th, due to adverse weather conditions, and, as this flower is so dependent upon climatic changes, there is nothing definite to be offered as to just what this year's yield will produce after October 10.

Jasmine Now Above Normal

According to the figures available at this writing, this season's jasmine flower yield up to and including September 15th was above the normal, in this way taking care of any great deficit that would otherwise develop on the long pull, due to an almost unfavorable beginning in August. In other words, even though the outlook at the commencement of the season did not promise so well, the yield by September 15th had taken care of any unusual developments as to size of yield.

Reports from those close to the soil in the Grasse district state that the actual yield in kilograms will be somewhat inferior to that of last year, and that the production of oil will also show a slight drop in quantity. The quality of the jasmine flowers is said to have been normal throughout.

As explained in previous reports, the enfleurage method is considered by many of the distilling perfumers to be the only way for them to secure the true jasmine odor, and, as the fats used for this purpose have gone up in price and the labor required is hard to get, the perfume produced from the pomades may see a rise in price. However, there will be no radical change anywhere, for the reason that the volatile solvents method of extraction is putting onto the market oil which may be purchased at a comparatively low price. It has been pointed out that the price paid the growers this season is two francs per kilogram lower than that of last year, when they received 17 francs, and it will, very probably, be thought, therefore, that such a reduction should find its way into a reduction of price on the oil. This apparent difference has been thoroughly balanced, however, by the increasing costs of production for the distilling perfumer who uses the enfleurage process, for example, and then counterbalanced again by the benefits received from the use of the volatile solvents method on the other hand. So that the situation with reference to jasmine remains practically stationary.

Much has been said upon the subject of this culture being in danger of gradually disappearing from the Grasse district because of the fact that the growers are becoming more and more dissatisfied with the small profits to be secured from their plantations. This year's price to the grower of 15 francs (or approximately 60 cents) per kilogram is regarded as being the last straw in every sense of the word, and a readjustment is being eagerly sought by those concerned.

Lavender Yield Spotty

Last year, as the trade will remember, saw a 40 per cent. drop in the lavender crop over the previous season, due to adverse weather conditions all through May, June, July and August of 1928. Furthermore, a great deal of the lavender was not gathered last year, for the reason that the prices paid were not regarded as being worth while. The yield for this season is spotty, being considered good in some sections and not so good in others, resulting in a final crop that is, perhaps, slightly below that of last year. Reports from some of the large distilling perfumers, however, seem to indicate that, despite the rigors of the Winter and the damage suffered, this year's yield will be 25 per cent. better than that of 1928, with the exception of several regions which early showed a decided deficit. This deficit, according to others, was large enough to bring the total for this year below that of last season.

At any rate, the market price for lavender oil is quiet, the results of the lavender fairs at Sault and Digne, held during the last part of September, not having been transmitted at this writing. It is thought that there may be a slight downward movement in price, something like 10 to 15 francs (40 to 60 cents) per kilogram, although, in general, it is thought that the prices of last year will be the rule for the next few months, at least.

Producers Press for Sale

The producers, as a whole, seem disposed to sell as soon as possible, in order to stave off a future reduction in price, as has been the case during the past two or three years. It should be borne in mind, however, that with the sale of stocks now in existence, the reaction downward of from 10 to 15 francs, mentioned above, may last only a few months, and it is not impossible

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that the early part of 1930 will see an increase in price on lavender oil. This condition will be manifested particularly if the reports now current that the yield, as a whole, was deficient is borne out by the final figures.

The distilling perfumers have practically terminated their treatment period for the tuberose, this culture having become relatively unimportant during the past few years, for the reason that its use has not been as extensive as was the case formerly. In addition to this, the tuberose is a very difficult plant to grow successfully, as pointed out in our report last month. Like the jasmine, the tuberose is a delicate flower and demands the most careful treatment, many of the distilling perfumers holding the view that the enfleurage method use for the jasmine is the only one which captures the true odor of the tuberose. In fact, the tuberose is said to require 72 hours contact with the specially prepared facts used in this process as compared with 48 hours for the jasmine. To secure the most satisfactory results it is also necessary for the tuberose to be gathered a short time before it actually opens, allowing it to open on the chassis holding the fat. All of these difficulties, together with the trouble encountered in getting labor that is really competent, naturally, does not lend to the encouragement for a more intensive development of this plant. No definite figures as to the yield for this year are available, but everyone conversant with the situation agrees that it will barely reach the 15,000 kilogram mark cited last month. If, therefore, there should be a sudden call of any size for this essential oil, a rise in price would, of course, result. There are, however, stocks in existence for the moment, which, added to this year's supply, would hold off any radical change in this direction.

One of the cultures which is practically non-existent in the Grasse district this year is the cassia. There are two kinds of cassia grown in this section, namely the Roman and Ancienne, or old cassia. The cold of last Winter, apparently, affected the cassia plants so adversely that no crop whatever is anticipated. There may be, of course, a very small amount gathered from scattered districts, but for all practical purposes this year's cassia yield will be nil. This condition should have some bearing upon the price of this essential oil, although just what the effect will be cannot be definitely stated at this writing.

Clary Sage Plantations Increase

Because of the fact that clary sage is being more extensively used in formulas that was the case several years ago, this oil is experiencing an activity that is wholly new to it. Very highly encouraged by the success attained this year, a number of the growers are putting in new plantations of clary sage. This year's crop was very satisfactory, serving to balance the lack of oil last year, leaving a market that is characterized by a spurt of activity that is very encouraging to everyone concerned.

Distillation of mint is progressing along normal lines, but the price for the plants has remained very low, between 50 and 60 francs ($2.00 and $2.40) per 100 kilograms, delivered to the distilling perfumer's place of business. Because of this lack of incentive to grow the mint, it is reported by those close to the situation that the growers of this plant are gradually abandoning it for plantations promising a higher profit.

Gathering of the rose-geranium is approaching, and it is thought that the yield for this year will not be very important as to size. This is disappointing to the trade, for the reason that every effort has been made in recent years to conserve this culture. As was pointed out in several instances recently, Northern Africa, particularly Algeria, is proving very favorable to the cultivation of the rose-geranium. Just what will happen to the rose-geranium in the Grasse section is still a matter of conjecture. At any rate, attempts to preserve it in this district have taken tangible form, the price to be paid the growers this year being very good, namely between 55 and 60 francs ($2.20 and $2.40) per 100 kilograms.

Monsanto Buys Mathieson Division

Monsanto Chemical Works, according to its June 30 statement, has made provisions for the acquisition of the Commonwealth Division of the Mathieson Alkali Works. The statement disclosed that "6,490 shares will be issued for the acquisition of the fine chemical division of the Mathieson Alkali Works, Inc., and for services rendered in connection therewith."

The balance sheet of Monsanto, in addition to giving effect to the shares shortly to be issued for the Mathieson acquisition, also gave effect to: Purchase as of June 30, 1929 of Rubber Service Laboratories Co.; reduction as of July 15, of the stated value of the capital stock from $33 1-3 per share to $16 2-3 per share effected by issue of two shares for each one outstanding; issuance of 8,930 shares as a 1½% stock dividend on Aug. 1 and Oct. 1, 1929, respectively.

The present state of the balance follows:

Assets: Land, buildings and building equipment, machinery and equipment, $7,549,281; patents and processes, $1; cash and call loans, $629,250; U. S. Government securities, $99,718; notes and acceptances receivable, $20,601; accounts receivable, $522,943; inventories, $1,437,915; prepaid insurance, taxes, etc., $49,906; investments and advances, $2,325,029; deferred charges, $139,630; total, $12,774,274.

Liabilities: Capital stock (represented by 310,852 no-par shares), $5,180,866; accounts payable, $367,827; accrued interest, taxes, etc., $33,029; federal tax reserve, $153,032; dividends payable, $86,429; purchase money obligations, $419,051; funded debt, $1,753,500; depreciation and replacement reserve, $1,922,075; insurance and contingent reserve, $65,650; other reserves, $91,309; earned surplus, $2,017,179; capital surplus, $684,327; total, $12,774,274.

Charles Boldt Dies

Charles Boldt, chairman of the executive committee of the Owens-Illinois Co., died in his sleep early in the morning of Oct. 10, at Hotel Plaza, New York. He was born in Louisville, Ky., sixty-one years ago. His home was in Santa Barbara, Cal., but since 1925 he has been spending part of the year at his estate at Irving-on-Hudson.

Mr. Boldt had been working on the merger of Owens-Illinois Co. and Continental Can Co. and the announcement of successful consummation of his efforts was made the morning of his death.

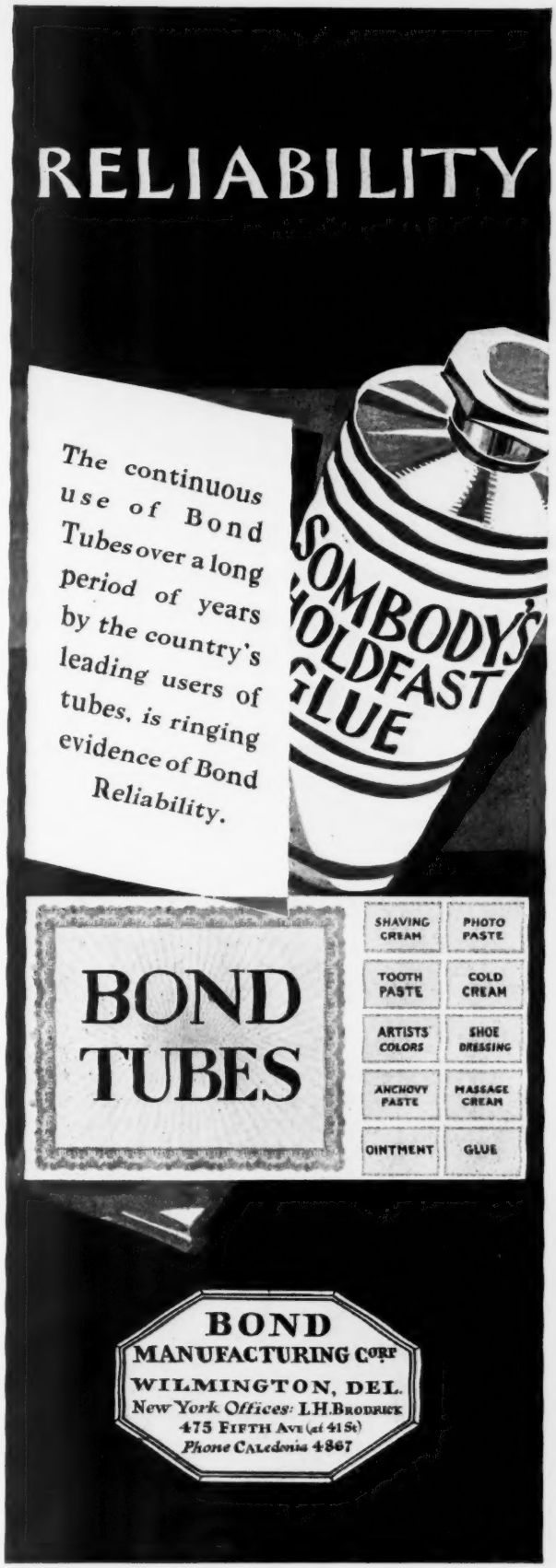
McK. & R. Buys Van Vleet-Ellis

Sale of Van Vleet-Ellis Corp., drug wholesalers with main office in Memphis, Tenn., and branches in Jackson, Miss., and Little Rock, Ark., to McKesson & Robbins, Inc., of Maryland, has been announced by officials of both companies.

Robert R. Ellis, formerly chairman of the board of Van Vleet-Ellis, has formed the Chemical Realty Co., of which he is president, and which owns the real estate formerly used by Van Vleet-Ellis. This company will own the Hessig-Ellis Building, Memphis, and property on Second st., immediately north of the Van Vleet-Ellis Co. The three blocks are said to be valued at $1,000,000.

The Van Vleet-Ellis Building has been leased to McKesson & Robbins for 10 years, and the Hessig-Ellis Building on Front and McCall sts., is vacant. The other property is occupied by a one story building.

Mr. Ellis does not indicate that he will leave the drug distribution business, and it is understood that prior to his attendence at the N. W. D. A. meeting at French Lick Springs, he attended a meeting at Cleveland of the Mutual Drug Co. He is said to have been accompanied by his brother of the Ellis-Jones Co., wholesalers of Memphis, Tenn., which company has had in operation for over a year a mutual division.



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Essential Oil of Salvia Officinalis

The plant, known as Salvia officinalis, grows in the littoral regions of the Mediterranean. The oil that is obtained from this plant varies very widely in composition and properties. These variations are due to variation in the time of the year at which the plant is gathered and also according to the part of the plant from which the oil is extracted. Thus a difference is noted when the plant is gathered in the Spring or in the Summer, or whether it is extracted from the flower heads alone or from the whole flowering plant, or in winter from the non-flowering plant.

The oil, that is obtained from the whole flowering plant, contains cineol in the proportion of 32 to 35%, about 30% of sesquiterpenes, 9 to 14% of borneol, 5 to 10 % of camphor and thujone, about 2% of esters. On the other hand the composition of the Winter oil is as follows:—13 to 20% of cineol, about 20% of sesquiterpenes, 7.5 to 12% of borneol, 20 to 32% of camphor and thujone, 2.2 to 3.7% of esters and about 15% of terpenic hydrocarbons.

The comparatively low solubility of these oils in alcohol and their high refractive indices characterize them from oils of other origin. It has been found that the camphor in the Italian oil is optically inactive. It is also laevorotary and thus differs from the oil obtained from Dalmatian, Spanish, French, German etc., plants. It was also found that the oil changes but little during the winter either in properties or composition. On the other hand the yield is less in the morning than in the evening. L. V. Morani, Nuovi Ann. Agri., volume 7, 25-40.

Examination of Lemon Oil

Fresh and carefully stored lemon gave indices of refraction of 70 to 76 at 20°C. Higher figures than 76 show that the oil has aged unduly in storage. Fresh oil has a lower acid number, older oil one between 6.0 and 3.0. Old oils give a characteristic color reaction with concentrated hydrochloric acid. In place of determining the residue after evaporation, the author proposes a distillation test with steam. A residue of 4% is considered as abnormal. Normal oils show Eibner-Hue co-efficients of 0.6 to 1.2 co-efficient higher than 1.2 and lower indices of refraction of the residue indicate that the oil is old or that it has been adulterated with paraffin oil or mineral oil. J. Pritzker and R. Jungkunz, Pharmac, Acta Helv., volume 3, pages 79-83.

Detection of Isopropyl Alcohol in Cosmetics

The presence of isopropyl alcohol in cosmetics is detected by means of the reagent, piperonal. Thus 10cc. of the original sample are distilled in the usual manner and the alcoholic distillate is cooled down by means of ice water. One cc. of the cooled distillate is then added to 3 cc. of an aqueous solution of hydroxylamine hydrochloride. The proportion of this reagent used in testing mouth washes and perfumes is 0.05 g. and for testing hair washes 0.1g. After the reagent has been added, the mixture is shaken and after 3 minutes have passed it is again shaken with 0.4g. of animal charcoal. The solution is then filtered. Five cc. of a half per cent. solution of piperonal in alcohol are first added and thereafter 20cc. of a solution of sulphuric acid. The latter is added slowly so as to avoid boiling The rest of the method is the usual standard method for detecting the presence of isopropyl alcohol. G. Reif Z. Unters. Lebensm., 1929, volume 57, pages 277-288.

Frances Page Griffith, Rochester, N. Y., manufacturer of cosmetics and beauty cream, has appointed Addison Vars, Inc., advertising agency, to direct its advertising account. The account will be handled by the Rochester office of that agency. Newspapers and magazines will be used.

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¶ Perhaps you, as a manufacturer, have a sealing problem that can be solved best by using corks. In that case, or if you are already using corks, allow us to send you generous samples of BOUCHER Corks for your approval. Simply write to *Tapered Cork Department, Cork Import Corporation, 345 West 40th Street, New York City* and say, "Please send me the samples of BOUCHER Corks offered in the October issue of Drug Markets." We shall be glad to send them to you. (State sizes and grades you use.)

BOUCHER Corks are made in Spain, the home of cork. American machines, operating under the supervision of American engineers, turn out these high grade corks to meet the standards of American manufacturers.

Boucher Corks
Made in Spain

Synthetic Aromatics

(*Continued from page 371*)

correct, but are supposed to represent an approximation sufficiently accurate for the use of the manufacturing perfumer. The quantities indicated are in grammes.

So that the manufacturing perfumer may try out the product anisic aldehyde along practical lines, we quote the following formulas given by Fouquet in this new work, with the reservation, of course, that DRUG MARKETS does not, under any circumstances, guarantee their accuracy or ultimate usefulness:

Acacia I

Anisic aldehyde (from anethol)	825 gr.
Phenylethyl alcohol	50 cm³
Phenylacetic acid	10 gr.
Phenylacetic aldehyde	5 gr.
Vanillin	40 gr.
Heliotropin	20 gr.
Jasmine, artificial or natural oil of	10 cm³
Neroli, artificial or natural	5 cm³
Mimosa, natural oil of	20 cm³
Civet, artificial crystallized	10 gr.
Musk ambrette	10 gr.

Acacia II

Anisic aldehyde (from anethol)	500 gr.
Linalol	175 cm³
Methyl anthranilate	75 gr.
Phenylethyl alcohol	50 cm³
Vanillin	35 gr.
Heliotropin	15 gr.
Jasmine, artificial, or benzyl acetate	100 cm³
Phenylacetic acid	5 gr.
Phenylacetic aldehyde	2 gr.
Mimosa, natural oil of	43 cm³

Acacia III

Anisic aldehyde (from anethol)	750 gr.
Linalol	50 cm³
Rose, artificial, or rhodinol (roseneone)	50 cm³
Phenylethyl alcohol	30 cm³
Jasmine, artificial or natural oil of	20 cm³
Neroli, artificial or natural	15 cm³
Vanillin, crystallized	35 gr.
Phenylacetic aldehyde	10 gr.
Nonyl, C°, aldehyde	10 gr.
Mimosa, natural oil of	20 cm³
Civet, artificial	10 gr.

Hawthorn I

Note: Anisic aldehyde is often sold under the name of artificial aubépine, or artificial hawthorn; it is the principle constituent of all artificial aubépine, or artificial hawthorn, perfumes.

Anisic aldehyde	825 gr.
Phenylethyl alcohol	75 cm³
Alcohol, *tubérique*	10 cm³
Benzyl acetate, or artificial jasmine	35 cm³
Neroli, natural or artificial	10 cm³
Mimosa, natural oil of (or acacia)	20 cm³
Heliotropin	15 gr.
Benzoin, resinoid of	10 gr.

Hawthorn II

Anisic aldehyde (from anethol)	750 gr.
Phenylethyl alcohol	65 cm³
Terpineol	35 cm³
Neroli, artificial	40 cm³
Jasmine, artificial	35 cm³
Acacia, artificial	25 cm³
Vanillin	10 gr.
Alcohol, *tubérique*	10 cm³
Lime blossom (hydroxcitronellal)	5 cm³
Mimosa, natural oil of	25 cm³

The foregoing formulas are given because of the fact that anisic aldehyde forms the larger part of the ingredients used, all of which may be utilized directly by dissolving in alcohol. These formulas will enable the manufacturing perfumer to produce perfumes, toilet waters, lotions, face powders, soaps, etc., of an agreeable odor. Furthermore, they will allow for ample profit on such a line in addition to the higher grade products, in which a number of high-price flower oils are used.

In the following formulas it will be noted that anisic aldehyde constitutes only a comparatively small part of the ingredients called for:

Chypre I

Geranium, oil of B terpeneless	350 cm³
Bergamot, or lynalyl acetate (bergamiol)	200 cm³
Anisic Aldehyde	50 gr.
Lavender, natural oil of	50 cm³
Methyl salicylate	25 cm³
Benzyl acetate	25 cm³
Isoeugenol	10 gr.
Oil of cedar	15 cm³
Vetivert, oil of	15 cm³
Citral	10 cm³
Resinoid of orris	100 gr.
Resinoid of styrax	50 gr.
Resinoid of tolu	50 gr.
Resinoid of benzoin	25 gr.

Mimosa I

Methyl acetophenone	75 cm³
Linalol	250 cm
Lemon oil	100 cm³
Almond, oil of bitter	25 cm³
Ylang Ylang	150 cm³
Mimosa, natural oil of	275 cm³
Isoeugenol	25 gr.
Anisic Aldehyde	60 gr.
Aldehyde amyl cinnamate	10 gr.
Resinoid of tonka or orris	30 gr.

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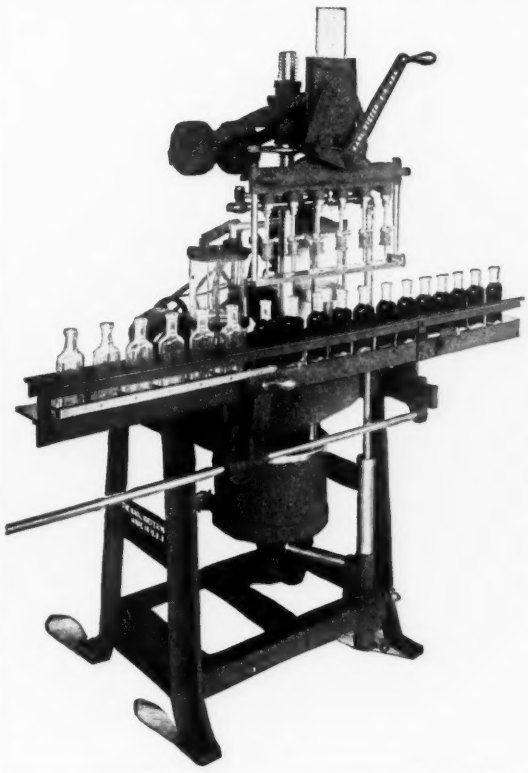

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Although, as explained above, the foregoing formulas contain or call for only a relatively small amount of anisic aldehyde, still they will serve to suggest several interesting compounds for the manufacturing perfumer on the lookout for an opportunity to add to or complete his line of synthetic perfumes.

Papers Delivered before A. Ph. A.

PHARMACOGNOSY AND BOTANY

Botanical, Pharmacological and Chemical Study of the Root, and Stem Bark of Viburnum Rufidulum—By Heber W. Youngken, James C. Munch and Florin J. Amrhein. Adequate supplies of material have been collected, identified pharmacognostically and subjected to pharmacological and chemical investigations. Work is being continued upon other identified species of viburnum.

Investigation of Oregon Grown Peppermint—By Alice H. Hayden and E. T. Stuhr. Chemical constants four samples oil from Oregon grown American peppermint determined and compared with Japanese sample. Menthol yields show possibilities successful growth. Crystallization menthol dependent upon methods employed.

Polypodium Occidentale (Licorice fern)—By F. J. Goodrich. Rhizome contains reducing sugars, sucrose, starch, pentosans, a volatile oil and no alkaloids. Non-toxic when fed white rats. Tests indicate possibility use as substitute for licorice.

Study of Peppermint Oil grown in the State of Washington—By Arthur A. Levine and C. H. Rayburn. The odor and taste of oil grown in Washington was equal to that of genuine eastern oils. Samples of oil from Yakima valley were lower in esters and total methol than those from southwestern Washington.

BACTERIOLOGY

A Thought on the Place of Volatile Oils in Plant Economy—By Frederick E. Marsh. Study to determine whether volatile oils from one portion of the plant might be more germicidal than those from another. Reports data on germicidal powers of oils from fruits, flowers, seeds and leaves upon six types of organisms.

PHARMACOLOGY AND BIO-ASSAYS

A Comparison of Methods for Demonstrating Healing of Rickets in the Biological Test for Vitamin D.—By C. F. Church and J. R. Lockwood. Various methods of demonstrating rickets and healing in the bones of rats employed in the biological test for vitamin D are compared by means of results from a series of experiments. The methods include X-ray photographs, line test and stained histological sections.

Assimilation of Vitamin A when Dissolved in Liquid Petrolatum—By B. Moness and W. G. Christiansen. Dutcher found Vitamin A as butter fat dissolved in mineral oil solution ineffective when fed to rats. Authors report cod liver concentrate dissolved in liquid petrolatum was effective to rats.

Vitamin Potency of Various Grades of Cod Liver Oil—By W. S. Jones and W. G. Christiansen. Cod liver oils were obtained from the same lot of cod livers at various ages and tested for vitamin A and D activity. Oil from fresh livers was most potent, and the activity of various grades decreased with increased exposure to liver tissue, water and air.

Notes on Cascara Sagrada—By Milford J. Harris and Edward D. Davy. Crystalline material reported as glucoside, or lactone, by different workers was isolated without the use of a precipitant, acid or alkali, and was found to be emodin. The modin had no laxative qualities but the water soluble resinous material continued to be highly active, but griping. A fluidextract made from the same drug had no griping action.

Assay of Pancreatin—By F. E. Willson. A modification of the Smith-Sorensen method for the determination of tryptic activity of Pancreatin is suggested. The end point obtained is very definite and results tend to show that greater accuracy can

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be obtained than with other methods. Data on the effect of hydrogen-ion control of the casein solution used in the method is given.

Critical Remarks on the U. S. P. Pancreatin Assays—By F. E. Willson. The temperature of the iodine solution and mode of procedure in testing amylolytic activity is liable to cause variations in results especially with samples stronger than U. S. P. Recommends temperature of 23° C. for iodine solution.

Further Studies of the Cat-Eye Method for the Bioassay of Mydriatics and Miotics—By James C. Munch. Using the technique previously developed for this assay, a study is made of the potentiating action of various mydriatics when sub-effective quantities are mixed before application to the eye of the cat. The development of synergism, addition or antagonism has been followed for a number of drugs more particularly mydriatics. The nature of antagonism between mydriatics and miotics is being investigated.

Red Squill Powders as Specific Raticides—By James C. Munch, E. E. Horn, and J. Silver. As the result of four years investigation and laboratory studies, a method has been developed from the manufacture of red squill powder having a consistent toxicity to rats of 250 mg/kg. Red Squill powder has been found to be harmless to animals other than rats under the conditions used. Wild rats appear to be somewhat more susceptible than white rats. Death results from central respiratory depression and not from cardiac effects.

Delicacy of Chemical and Physiological Tests for Strychnine—By James C. Munch and J. C. Ward. Measured volumes of strychnine solution were evaporated to dryness and chemical tests applied to determine the limit of delicacy. The mineral concentrations of strychnine having just perceptibly bitter taste were determined using water and various saline solutions as solvents. The effect of glycerine, gelatine, and other substances upon the apparent bitterness of solutions was followed.

***Bioassay of Aconite and Its Preparations.* 2. The Comparative Toxicity of Tincture and Fluidextract of Aconite to Guinea-Pigs and Rats**—By James C. Munch and R. I Grantham. Rats were found suitable for the preliminary assay of tincture and fluidextract of aconite. Studies were made to determine the lethal dose when solutions were injected subcutaneously and intraperitoneally into guinea pigs and rats.

Bioassay of Aconite and Its Preparations.* 3. The Pharmacology and Pharmacognosy of Various Species of *Aconitum—By James C. Munch and H. H. Crosbie. Much difficulty has been met in obtaining commercial shipments of aconitum napellus free from other varieties. Pharmacognostic examinations have shown certain differences in structure; even bast fibers have been found. The pharmacology of various species has been reviewed. Authentic aconitum napellus should be grown under controlled conditions and studied pharmacognostically and pharmacologically.

Digitalis Assay Standards—By L. W. Rowe. Comparative assays of samples of the more important methods and conclusions drawn as to the relative strength of the various standards proposed for each method. Using the standard of the U. S. P. X. as 100 per cent., that of the Cat Method is about 110 per cent., the M. L. D. Frog Heart Method is 90 per cent., the Four Hor Frog Method is 100 per cent. and the Guinea Pig Method standard is about 100 per cent. The choice of a standard for Digitalis for the next U. S. P. is discussed as well as a more sutiable method than the present recommended One Hour Method.

***Studies of Astringency:* A Method of Measuring Astringency**—By E. R. Theis. If well hydrated tissue is treated with an astringent liquid, a net increase of the system occurs, which can be accurately measured. The astringent action of various chemicals and commercial preparations has been demonstrated and is shown graphically.

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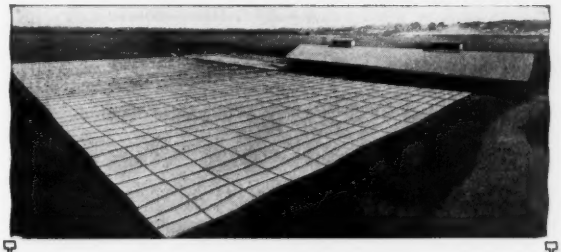

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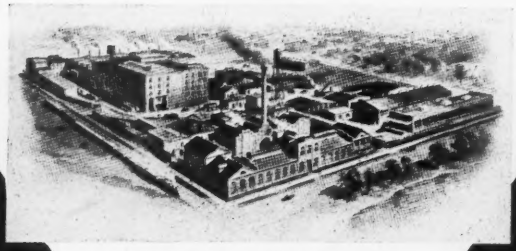

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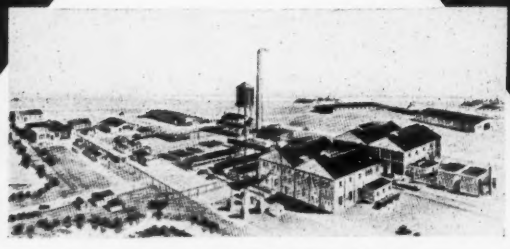

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Acetanilid
Ammonium Valerate

Chemicals

Monthly Review

More Cod Liver Oil Produced

A 25 per cent. increase in the production of Norwegian medicinal cod liver oil for 1929 has given a serious setback to refineries in Newfoundland. For the past three years Newfoundland cod liver oil has commanded a premium over the Norwegian product in the United States. It is anticipated this season will show a relative increase in the production of common oil with an anticipated increase in the production and exportation of a secondary quality of medicinal oil suitable for poultry feed and cattle feed, says Consul A. M. Warren, St. John's.

Imports of cod liver oil during the first five months of 1928 and 1929 into the United States were 1,012,000 pounds, valued at $1,012,000, and 1,236,000 pounds, valued at $1,117,000, respectively.

Iodine Quotas Established

The Iodine Producers' Association in Valparaiso establishes a quota to each nitrate company equipped to manufacture iodine and the agents in Iquique receive their shipping orders from Valparaiso. Although no information is available as to the production of crude iodine in the Province of Tarapaca, Chile, according to the records of the customhouse, the exports of crude iodine to all countries from Iquique amounted to 427,000 pounds during the quarter ended June 30, 1929. Of the total exports of crude iodine for the June quarter of 1929, 78,199 net pounds, valued at $295,000, were shipped to the United States as compared with 83,390 net pounds for the preceding quarter. For the quarter ending June 30, 1928, the figures were 138,143 pounds, valued at $586,486. (Consul S. C. Worster, Iquique).

Imports of iodine into the United States during 1927, 1928, and the first six months of 1929 were 926,000, 721,000, and 340,000 pounds, valued at $2,901,000, $2,429,000, and $1,208,000, respectively.

Petrolatum in the Netherland Medicinals

In the Netherlands there is an appreciable demand for all kinds of pharmaceutical and medicinal products, a considerable part of which is supplied by Netherland manufacturers whose output includes face creams, creams for protection or treatment of the skin, various ointments and a wide variety of similar preparations in all of which petroleum jelly forms the largest ingredient.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Acetanilid, USP, 200 lb bbls..lo.	.36	.37	.37	.36	.37	.28
Acetone, pure 350 lb drs wks..	.16	.16½	.19	.16	.18	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.35	1.35	1.25	1.40	1.25
ACID, Acetylsalicylic, 225 lb ....bbls.	.85	.90	.90	.85	.90	.85
Agaric, 1 oz vials .....oz.	.....	3.50	3.50	3.50	3.50	3.50
Arsenous, USP, 220 lb bbls lb.	.....	.18	.18	.18	.18	.18
Benzoic, USP, 100 lb bbls.lb.	.60	.61	.61	.60	.61	.60
Boric, 300 lb bbls.....lb.	.07½	.08	.10½	.07½	.12	.11
Cacodylic, 5 lb. bot.....lb.	.....	8.00	8.00	8.00	8.00	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82	4.82	4.82	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18	.19	.14	.21	.14
Cinnamic, 5 lb cans.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Citric, USP, crys 230 lb bbl .....lb.	.....	.46	.46	.46	.46	.44½
USP, crys imp. 112 lb keg .....lb.	.59	.61	.61	.59	.61	.55
USP, powd 200 lb bbl...lb.	.....	.47	.47	.47	.47	.45½
Diethylbarbituric, 1 lb bot lb.	.....	4.60	4.60	4.60	4.60	4.60
Gallic, USP, 150 lb bbls..lb.	.....	.74	.74	.74	.74	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75	1.75	1.40	1.45	1.40
Hydriodic, USP, 10% 5 lb bot.....lb.	.....	.80	.80	.80	.80	.80
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	.....	.55	.55	.55	.55	.55
Hypophosphorous, USP, 30% .....lb. 5 gal demis.....lb.	.....	.85	.85	.85	.85	.85
Lactic, USP, VIII 100 lb cbys lb.....	.56	.62	.62	.56	.62	.56
USP, X 100 lb cbys.....lb.	.62	.64	.64	.62	.64	.62
Phenylcinchonic.....lb.	.....	4.50	4.50	4.50	4.50	4.50
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15	.15	.14	.16	.14
Pyrogallic, crys 5 lb cans..lb.	1.40	1.50	1.50	1.40	1.50	1.40
Resublimed, 5 lb cans...lb.	1.80	1.85	1.85	1.80	1.85	1.80
Salicylic, USP, 100 lb bbls.lb.	.39	.40	.40	.39	.41	.40
Succinic, 100 lb bbls.....lb.	.....	1.35	1.35	1.35	1.35	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06	.06	.05	.06	.05
Tannic, USP, fluffy 50 lb bbls. .....lb.	.85	.90	.93	.85	.93	.87
Powd 200 lb bbls.....lb.	.80	.85	.85	.80	.85	.80
Tartaric, USP, 300 lb bbls.lb	.37½	.38½	.38	.37½	.38	.35
Aconitine, Alk, crys 1 oz vials .....oz.	.....	30.00	30.00	30.00	30.00	30.00
Amorphous, 1 oz vials....oz.	.....	20.00	20.00	20.00	20.00	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.15	.16	.16	.15	.16	.15
Anhydrous, 350 lb bbls....lb.	.16	.18	.18	.16	.19	.16
Agaricin, 1 oz vis incl.....oz.	.....	2.32	2.32	2.32	2.32	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.25	1.35	1.35	1.25	1.55	1.25
Ethyl, USP, 190 pf 50 gal bbls.....gal.	2.69½	2.79½	2.79½	2.69½	2.79½	2.66½
Pure tax free.....gal.	.61	.69	.69	.61	.77	.54
Grain drums.....gal.	2.69	2.79	2.79	2.69	4.00	2.67
Denatured, drums add 7c for bbls.....						
No. 1 spec.....gal.	.52	.60	.60	.47	.55	.43
1 comp.....gal.	.53	.61	.61	.48	.56	.44
No. 3 comp.....gal.	.52	.60	.60	.47	.56	.44
23 a, spec.....gal.	.53½	.61½	.61½	.48½	.68	.43½
39 b, spec.....gal.	.56	.65	.71	.62	.71	.56
40 m, spec.....gal.	.51½	.59½	.66½	.56½	.66½	.51½
Isopropyl refd 98-99% drs .....gal.	1.25	1.50	1.50	1.25	1.50	1.25
Phenylethyl, 1 lb bot.....lb.	8.00	10.00	10.00	8.00	10.00	8.00
Aloin, USP, 100 lb cases....lb.	1.65	1.70	1.70	1.25	1.30	.90
Aluminum Acetotartrate kegs .....lb.	...	1.60	1.60	1.60	1.60	1.60
Amidipyrine, 10 lb boxes....lb.	4.25	4.45	4.45	4.25	4.75	4.25
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40	.40	.30	.38	.34
Benzoate, USP, 1 lb bot...lb.	.....	1.27	1.27	1.27	1.27	1.27
Borate, 10 lb bot.....lb.	.....	.35	.35	.35	.35	.35
Bromide, USP, 450 lb bbls. lb.	.47	.49	.50	.47	.50	.48
Imported, 112 lb boxes..lb.	.48	.50	.50	.48	.50	.48
Carb, USP, lump 100 lb kegs .....lb.	.....	.13½	.13½	.13½	.13½	.13½
USP, powd 100 lb kegs..lb.	.....	.14½	.14½	.14½	.14½	.14½
Citrate, 100 lb kegs.....lb.	.85	.90	.90	.85	.90	.85
Ichthyolate, as to brand..lb.	4.00	4.50	4.50	4.00	4.50	4.00
Iodide, USP, 25 lb jars ..lb.	.....	5.20	5.20	5.20	5.20	5.20
Phosphate, dibasic 250 lb bbls .....lb.	.48	.50	.50	.43	.48	.43
Salicylate, USP, 100 lb kegs .....lb.	1.15	1.20	1.20	1.15	1.20	1.15
Valerate, USP, 25 lb jars..lb.	2.75	2.90	2.90	2.75	2.90	2.75

Chemicals

{ Monthly Review }

For medicinal and pharmaceutical purposes, use is made almost exclusively of white petrolatum while the yellow is employed as lubricating material for machinery

For pharmaceutical preparations, etc., the field is not entirely covered by Netherland enterprise but there are steady importations from foreign countries, among which Germany takes the first place. There is also a considerable number of American manufacturers of pharmaceutical products and proprietary medicines who have been actively represented in the Netherlands for some years for such articles as creams and cosmetics. It appears that petroleum jelly and similar preparations are locally manufactured, although in negligible quantities. Most of the petroleum jelly entering the Netherlands comes from the United States, while Belgium is the chief European supplier of this commodity. (Consul Egmont C. von Tresckow, Rotterdam).

Imports of yellow and white petroleum jelly into the Netherlands during 1926, 1927, 1928, and the first half of 1929 amounted to 406,367, 628, and 294 metric tons, valued at $56,000, $25,000, $37,000, and $15,000, respectively.

Glycerine Stronger in Tone

Glycerine is stronger on spot with the price at 14c per pound, in bulk. This undoubtedly represents an effort on the part of producers to stimulate a market that has been rather weak all summer, as no large buying has as yet appeared. Buying has been, rather, from hand to mouth with the result that stocks in the hands of consumers are small. November is the month in which contracts are placed for the first six months of the coming year by buyers who have been rather cagy and doubtful of the apparent strength of the market at present. This is due to the prevalent knowledge of large stocks of glycerine in the market with the buyers hopeful that when contracts are offered a somewhat lower price will prevail. November will be the real test of the strength of the market with refiners making efforts to maintain a market, the underlying tendency of which is not particularly strong.

The exports of Glycerine from the United States during August 1929, amounted to 46,497 lbs. against 138,517 lbs. in August 1928. The imports for that month were 1,140, 986 lbs. of Crude and 119,734 lbs. of refined glycerine, totalling 1,260,720 lbs. against 164,766 lbs. for both crude and refined for the same nonths last year.

The tendency this year has been a decided falling off of exports and an increase of imports of glycerine. Exports for the first six months of this year totaled 867,850 pounds, against 1,281,402 pounds in 1928. Imports for the first six months totaled 13,260,407 pounds, against 2,050,408 pounds in the same period of 1928. This has been due partly to the fact that several large buyers here have purchased abroad, taking advantage of low prices prevailing there.

Alcohol is very strong in tone with distillers reporting that shipments on contracts are proceeding at an ever increasing speed. The tendency throughout the entire country is one of strength and with consumption increasing it would not be unlikely that an increase in price would be instituted by the distillers.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Amylene Hydrate, 1 lb bot..lb.	.....	7.10	7.10	7.10	7.10
Antipyrine, USP, 100 lb cans.lb.	2.65	2.66	2.66	1.53	1.75	1.53
Apomorphine Hydrochloride, ¼ oz. vials.....oz.	22.60	22.70	22.70	22.60	35.80	22.60
Arecoline Hydrobrom, 1 oz vials .....oz.	7.75	8.75	8.75	7.75	11.45	7.75
Aspidospermine Amorphous.oz.	.....	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz. vials .....oz.	7.00	9.10	9.10	7.00	9.10	9.10
Methyl bromide, 1 oz vials.oz.	.....	25.00	25.00	25.00	25.00	25.00
Sulfate, 5 oz cans.....oz.	.....	3.00	3.00	3.00	3.00	3.00
Single ounce.....oz.	.....	3.15	3.15	3.15	3.15	3.15
Barium Iodide, 5 lb box.....lb.	.....	5.15	5.15	5.15	5.15	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10	.10	.09½	.10	.09½
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.85	.90	.90	.85	.90	.80
Domestic syn. 50 gal bbl..gal.	.70	.75	.75	.70	.75	.65
St. Thomas, 50 gal bbls...gal.	.80	.90	.90	.80	.90	.80
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60	2.60	2.50	2.60	2.50
Benzoyl Cholride, 500 lb dr..lb.	.....	1.00	1.00	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC.....lb.	.....	1.40	1.40	1.40	1.40	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35	.35	.30	.35	.30
Formate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Succinate, 160 lb cby.....lb.	.....	5.25	5.25	5.25	5.25	5.25
BISMUTH, metal 100 lb cases .....lb.	.....	1.70	1.70	1.70	2.25	1.70
Ammon. Citrate, USP, 5 lb cans.....lb.	.....	5.50	5.50	5.50	5.65	5.50
Betanaphtholate, 5 lb box.lb.	.....	3.10	3.10	3.10	3.35	3.10
Citrate, USP, 5 lb cans....lb.	.....	2.75	2.75	2.75	2.95	2.75
Chloride.....lb.	.....	3.15	3.15	3.15	3.40	3.15
Hydroxide.....lb.	.....	3.05	3.05	3.05	3.30	3.05
Nitrate, 25 lb jars.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Oxide anhydrous.....lb.	.....	3.40	3.40	3.40	3.70	3.40
Oxychloride, 25 lb boxes...lb.	.....	3.10	3.10	3.10	3.35	3.10
Salicylate, 25 lb boxes.....lb.	.....	1.80	1.80	1.80	1.95	1.80
Subcarbonate, USP, 25 lb boxes.....lb.	.....	2.20	2.20	2.20	2.70	2.20
Subcarbonate, X-ray diag 1 lb. bot.....lb.	.....	3.45	3.45	3.45	3.65	3.40
Subgallate, USP, 25 lb boxes .....lb.	.....	2.50	2.50	2.50	2.70	2.50
Subiodide, 5 lb lots.....lb.	.....	4.25	4.25	4.25	4.40	4.20
Subnitrate, USP, 25 lb jar.lb.	1.58	1.60	1.65	1.58	2.30	1.60
Subsalicylate, USP, 25 lb boxes.....lb.	.....	2.90	2.90	2.90	3.15	2.90
Tannate.....lb.	.....	2.65	2.65	2.65	2.65	2.45
Borax, crys USP, 400 lb bbls.lb.	.....	.03½	.03½	.03½	.05	.03½
Bromoform, USP, 5 lb bot cases .....lb.	1.65	1.90	1.90	1.65	1.90	1.65
Butylchloral Hydrate bot....lb.	4.00	5.00	5.00	4.00	5.00	4.00
Cadmium iodide, 10 lb bot...lb.	.....	4.55	4.55	4.45	4.55	4.45
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.75	2.80	2.95	2.75	3.20	2.80
Citrated, 50 lb cans....lb.	2.35	2.60	2.60	2.00	2.25	2.00
Hydrobromide, 1 lb bot...lb.	4.80	5.00	5.00	4.80	5.00	4.65
Hydrochloride, 1 lb bot...lb	6.05	6.55	6.55	6.05	6.55	6.05
Sulfate, 1 lb bot.....lb.	5.40	5.90	5.90	5.40	5.90	5.40
Sodium Benzoate, tins....lb.	.....	3.05	3.05	3.05	3.05	3.05
Salicylate, tins.....lb.	.....	2.95	2.95	2.95	2.95	2.95
Calcium Bromide, 100 lb cs..lb.	.....	.60	.60	.60	.60	.60
Carb, USP, 175 lb bbls....lb.	.04½	.06½	.06½	.04½	.06½	.04½
Glycerophos, 250 lb bbls...lb.	....	1.40	1.40	1.40	1.40	1.40
Hypophos, USP, 25 lb cans lb.	.60	.65	.65	.60	.65	.60
Iodide, 5 lb bot.....lb.	...	4.35	4.35	.35	4.35	4.35
Lactate, USP, 500 lb bbls lb.	.45	.50	.50	.45	.50	.45
Lactophosphate Soluble...lb.	.....	1.20	1.20	1.20	1.20	1.20
Powdered tins.....lb	.....	1.00	1.00	1.00	1.00	1.00
Insol, powd tins.....lb.	.....	.50	.50	.50	.50	50
Sulfide, USP, 100 lb drs...lb.	.21½	.24	.24	.21½	.25	20
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.63	.63½	.63½	.59½	.66	.57
Refined powd.....lb.	.65	.66	.66	.63	.70	.62
½ oz tab, 100 lb cases....lb.	.76	.77	.77	.73	.75	.68
Liniment, bbls.....gal.	2.20	2.30	2.30	2.20	2.30	2.20
Monobrom, 100 lb cases...lb.	1.85	1.90	1.90	1.85	1.90	1.85
Casein edible, 100 lb kegs...lb	.45	.55	.55	.45	.55	.45
Castor Oil, odorless, 200 gl. bbls. lb.	.14½	.....	.....	.....	.....	.....
Chalk drop, 175 lb bbls.....lb.	.....	.03½	.03½	.03½	.03½	.03½
Precip light, 250 lb csk....lb.	....	.04½	.04½	.04½	.04½	.04½
Heavy 540 lb csks.....lb.	.02½	.03½	.03½	.02½	.03½	.02½
Bulk.....ton	.....	5.00	5.00	5.00	5.00	5.00
English, 7 lb bags.....lb.	.....	.08½	.08½	.08½	.08½	.08½
Charcoal Animal medicinal jars incl.....lb.	.....	.50	.50	.50	.50	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.05½	.06	.06	.05½	.06	.05½
Chloroform, USP, 50 lb drs...lb.	.25	.27	.30	.25	.30	.28
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.80	.80	.75	.80	.70
100 lb drums.....lb.	.55	.60	.75	.70	.75	.65
Cholesterin.....oz.	5.50	5.85	5.85	5.50	5.85	4.00
Chromium Sulfate Scales, tins .....lb.	.55	.60	.60	.55	.60	.55
Powdered tins.....lb.	.60	.65	.65	.60	.65	.6
Chrysarobin, 50 lb tins.....lb.	3.75	4.10	4.25	3.75	4.25	3.65
Cinchonine Alk, 100 oz tins.oz.	.. ..	.38	.38	.38	.38	.38
Crystal.....oz.	.43	.46	.68	.65	.68	.65
Sulfate, 100 oz tins.....oz.	.....	.25	.25	.25	.25	.25
Cinchonidin Sulfate, 100 oz tins .....oz.	.35	.35	.35	.35	.35	.35
Cocaine Alk, USP, 1 oz vial..oz.	.....	11.07	11.07	11.07	11.07	11.07
Hydrochloride, USP.....oz.	.....	8.50	8.50	8.50	8.50	8.50
Cocoa Butter, 12 lb boxes...lb.	.42	.45	.45	.42	.50	.40

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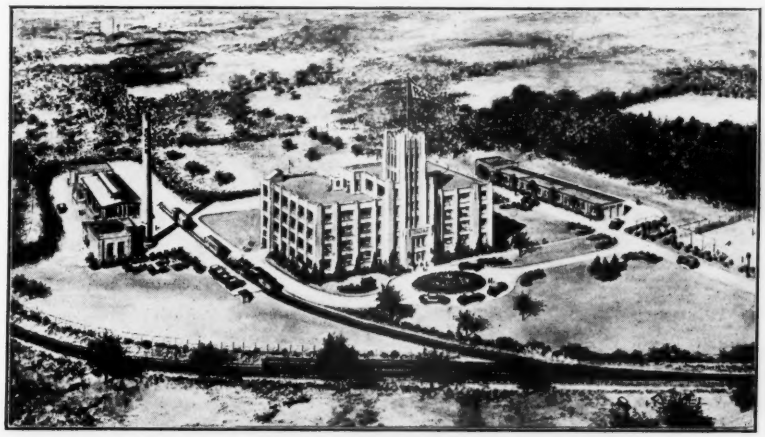

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NUTLEY NEW JERSEY

{ Monthly Review }

American Toiletries in Algeria

There is a growing demand for American toilet and medicinal preparations in Algeria, states a report from Vice Consul Robert English, Algiers. This demand is moreover susceptible of being stimulated by recourse to advertising and it is also believed that the appointment of local distributors in Algeria would have a more beneficial effect. With the exception of those American firms that have established branch factories in France or special organizations in that country, other American products of this class are handled by one of two or three large wholesale houses in Paris or Nice who supply the local distributor in Algeria. These firms as far as can be learned, do not make any great effort to promote in Algeria the sales of the American products handled by them. The retail shops handling these products keep them in stock largely to meet the demands of the winter tourist trade which is in itself of considerable importance. There are among the products now imported or susceptible of importation from the United States some that can be sold to the inhabitants of Algeria in quantities sufficient to justtify the appointment of a local representative.

Swiss Increases Medicinal Exports

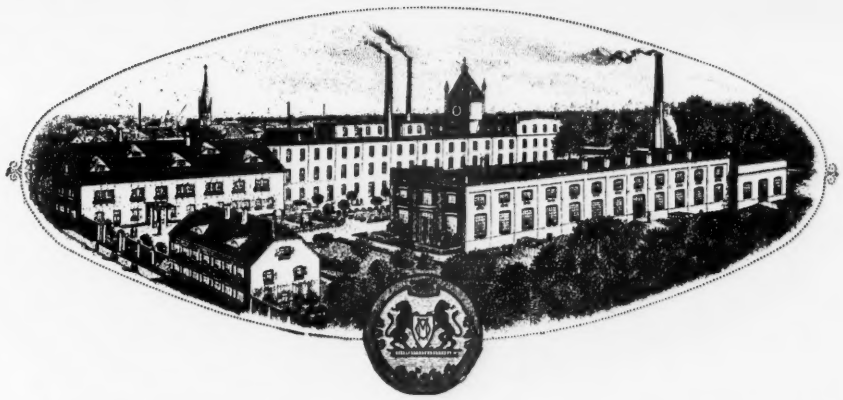
The pharmaceutical branch of the Swiss dye industry showed good business during the first half year with increased export trade. Prices, which declined somewhat, are expected to rise as a result of an international agreement reached by Swiss, German, and French concerns to regulate sales policies. This trade is essentially an interlocking business and much of Switzerland's export trade goes into countries having the most active competition. The German trade is by far the most important, with other large exports to France, Great Britain, the United States, and Italy. Medicinal specialties reported good sales. (Vice Consul C. W. Cannon, Zurich).

American Toiletries in Ireland

American toiletries are enjoying a market in the Irish Free State. The principal demand at present centers in Dublin and, to a lesser extent, in Cork. Of the cosmetics sold, talcum powders and creams, particularly vanishing cream, enjoy the greatest demand. The average talcum powder retails at one shilling ($0.24), while the average cream in tube retails at 1s. 3d. ($0.30), and cream in jars at 2s. 6d. ($0.60). Popular prices for compacts are from 1s. 6d. to 6d. ($0.60). Loose powders retail at from one shilling ($0.24) to four shillings ($0.96). One shilling is the popular price for lipsticks. Lip salve in stick form in a metal case enjoys the greatest demand, while that retailed in paste form is little used. The Irish Free State does not impose import duties on toilet preparations unless they contain spirits.

While Haiti has an estimated population of 2,550,000, the overwhelming majority has little use for cosmetics. The higher class Haitians and the foreign colony, are the only developed outlets. With the exception of a few barber shops where hair cutting and shampooing is done, there are no beauty parlors in Haiti. Supplies of face

	Current Market	1929 High	1929 Low	1928 High	1928 Low
CODEINE Alk, 1 oz vials, 10 lots ... oz.	.....	11.87	11.87	10.37	10.37	10.37
Hydrobromide ... oz.	.....	8.92	8.92	7.42	7.92	7.42
Hydrochloride ... oz.	.....	10.87	10.87	9.37	9.87	9.37
Nitrate, oz vl 10 oz lots ... oz.	.....	9.80	9.80	8.30	8.80	8.30
Phosp, oz vl, 10 oz lots ... oz.	.....	9.42	9.42	7.92	8.42	7.92
Salicylate ... oz.	.....	8.25	8.25	6.75	7.25	6.75
Sulfate, oz vl, 10 oz lots ... oz.	.....	9.67	9.67	8.42	8.92	8.42
COD LIVER OIL Nor., 30 gal bbls ... bbl.	29.00	30.00	36.00	22.00	48.00	38.00
Newfoundland ... bbl.	.....	46.00	46.00	46.00	46.00	46.00
Colchicino Alk, USP, 1 oz vl ... oz.	.....	20.00	20.00	20.00	20.00	20.00
Salicylate, 1 oz vls ... oz.	.....	35.50	35.50	35.50	35.50	35.50
Collodion, USP, 30 lb drs ... lb.	.....	.23	.23	.23	.23	.23
Corn Syrup, 42 deg. 50 gal bbls. 100 lb.	3.91	4.16	4.16	3.91	4.51	3.31
Cream Tartar, USP, 300 lb bbls ... lb.	.27½	.27½	.28	.26½	.28	.26
Imp. powd. 224 lb bbls ... lb.	.25½	.25½	.27	.25½	.27½	.25½
Creosote, USP, 42 lb cbys ... lb.	.40	.42	.42	.40	.42	.40
Carbonate, 150 lb ... lb.	1.50	1.60	1.60	1.50	1.60	1.50
Cresol, USP, 400 lb drums ... lb.	.....	.20	.20	.20	.20	.20
500 lb drums ... lb.	.....	.20	.20	.20	.20	.20
DIGITALIN Pure, 1 oz vial ... oz.	15.00	15.50	15.50	15.00	15.50	15.00
Dover's Powder, USP, 5 lb tin ... lb.	2.45	2.50	2.50	2.45	2.50	2.45
Duboisine Sulfate, 1 oz vl ... oz.	.....	30.07	30.07	30.07	30.07	30.07
Emetine Alk, 15 gr vial ... oz.	.....	.85	.85	.85	.85	.85
Hydrochloride, USP, 1 oz vl ... oz.	35.00	36.00	36.00	35.00	36.00	35.00
15 grain vials ... oz.	2.50	2.70	2.70	2.50	2.70	2.50
Epsom Salts, USP, 200 lb bbls ... 100 lb.	2.25	2.50	2.50	2.25	2.50	1.85
Imp. 100 lb bbls ... 100 lb.	1.95	2.00	2.00	1.95	2.00	1.95
Ergotin Bonjean, 1 lb jars ... lb.	18.50	19.00	19.00	18.50	21.00	15.25
Eserine Alk, 1 oz vials ... oz.	.....	50.00	50.00	50.00	40.00	40.00
Salicylate, 1 oz vials ... oz.	.....	40.00	40.00	40.00	40.00	40.00
Sulfate, USP, VIII 1 oz vials ... oz.	.....	40.00	40.00	40.00	40.00	40.00
ETHER, USP, 55 lb drums ... lb.	.....	.18	.18	.18	.16	.15
Anaesthesia, 55 lb drums ... lb.	.....	.23	.23	.23	.21	.20
Nitrous, 1 lb bot ... lb.	.....	.80	.98	.80	.95	.95
Ethyl Chloride, 200 lb bot ... lb.	.22	.24	.24	.22	.25	.22
Ethyl Iodide, 5 lb bot ... lb.	.....	6.25	6.25	6.25	6.25	6.25
Formaldehyde, USP, 100 lb cbys 1c-1 wks ... lb.	.10½	.10½	.10½	.09½	.10	.07½
Gall Extract ... lb.	.20	.21	.21	.20	.21	.20
Gelatin, USP, Silver, 100 lb cs ... lb.	.55	.60	.60	.55	.60	.55
Pure Food, 50 lb bbls ... lb.	.53	.55	.55	.53	.55	.53
GLANDULAR SUBSTANCES						
Duodenal Substance, 1 lb lots	.....	5.50	.....	.....	.....	.....
Liver Substance (Hepatic) 1 lb lots	.....	4.50	.....	.....	.....	.....
Orchic Substance (Testicular)	.....	4.75	.....	.....	.....	.....
Ovarian Substance, whole, 1 lb lots	.....	26.00	.....	.....	.....	.....
Ovarian Residue, 1 lb lots ...	.....	20.00	.....	.....	.....	.....
Pituitary Substance, whole 1 lb lots	.....	40.00	.....	.....	.....	.....
Pituitary Substance, Anterior Lobe, 1 lb lots	.....	27.00	.....	.....	.....	.....
Thyroid, U. S. P., 1 lb lots ...	.....	4.75	.....	.....	.....	.....
Oxgall Powder, 1 lb lots ...	.....	1.35	.....	.....	.....	.....
Glucose, (grape sugar) dry 70° bags c-1 NY ... 100 lb.	3.14	3.24	3.24	3.14	3.24	3.14
GLYCERIN, CP, 550 lb drums ... lb.	.....	.14	.15½	.13¾	.19	.15
Gold Chloride, bottles ... oz.	12.00	12.50	12.50	12.00	12.50	12.00
Guaiacol, liq. USP. 100 lb cbys ... lb.	1.65	1.75	1.75	1.65	2.25	1.75
Crystals ... lb.	2.25	2.50	2.50	2.25	2.50	2.25
Benzoate, 1 lb bottles ... lb.	.....	13.00	13.00	13.00	3.00	13.00
Carbonate, 5 lb boxes ... lb.	1.70	2.50	2.50	1.70	2.50	1.70
Haarlem Oil, bot 6 gr cases ... gr.	.....	3.25	3.25	3.25	3.25	3.25
Imported, 5 gross cases ... gr.	.....	3.50	3.50	3.50	3.50	3.50
Halazone, 5 lb bot ... lb.	2.75	3.25	3.25	2.75	3.25	2.75
Hexamethylenetetramine, USP, 100 lb dr ... lb.	.50	.56½	.62½	.48	.62½	.52
Homatropine Hydrobrom USP ... oz.	.....	14.50	14.50	14.50	14.50	14.50
5 oz and 1 oz vials ... oz.		13.50	13.50	13.50	13.50	13.50
Hydrastine Alk, USP, 1 oz vial ... oz.	20.50	21.00	21.00	20.50	21.00	20.50
Hydrochlide, USP, 1 oz vials ... oz.	20.50	21.00	21.00	20.50	21.00	20.50
Sulfate, 1 oz vial ... oz.	22.50	23.00	23.00	22.50	23.00	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials ... oz.	.....	40.00	40.00	40.00	40.00	40.00
Hydrogen Peroxide, USP, soln 375 lb bbls ... lb.	.03¾	.04½	.04½	.03½	.05	.03½
Hyoscine Hydrobrom, USP, 1 oz vials ... oz.	.....	13.57	13.57	13.57	13.57	13.57
5 oz, 1 oz vials ... oz.	13.07	13.57	13.57	13.57	13.57	13.07
Hyoscyamine Alk, crystals, 1 oz vials ... oz.	.....	25.07	25.07	25.07	25.07	25.07
Amorphous, 1 oz vial ... oz.	.....	75.07	75.07	75.07	75.07	75.07
Hydrobromide, USP, 1 oz vial ... oz.	.....	35.07	35.07	35.07	35.07	35.07
Sulfate, 1 oz vial ... oz.	.....	25.07	25.07	25.07	25.07	25.07
Hypoquinone, 100 lb kegs ... lb.	.....	1.25	1.25	1.25	1.25	1.25
ICHTHYOL, tins ... lb.	4.00	4.25	4.25	4.00	4.25	4.00
Iodide Arsenous, 5 lb bot ... lb.	.....	5.20	5.20	5.20	5.20	5.20
Arsenous-Mercuric soln, 5 lb bot ... lb.	.....	.26	.26	.26	.26	.26



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Monthly Review

powder, rouges, etc., are ordinarily purchased from local dry goods stores or drug stores. Most of the cosmetics and perfumes on hand at the present time consist of well-known French makes, which are imported direct from that country.

Nevertheless, the share of the United States in imports of cosmetics, perfumes, and toilet preparations is not insignificant. The following table shows such imports for the fiscal years ended Sept. 30, 1926 and 1927:

	1925–26	1926–27
	Gourdes	*Gourdes*
France	393,160	289,288
Germany	25,465	11,953
Italy	14,265	9,027
Netherlands	4,240	1,957
United States	161,510	141,099
Other countries	5,480	2,469
Total	604,120	455,793

(One gourde equals $0.20 United States currency).

Vice consul George D. Lamont, Port au Prince.

Guayaquil and Quito, the Principal Ecuadorian Cities Purchasing American Toiletries

During 1928, Ecuador was the seventh best South American market for American toilet preparations, having purchased $128,000 worth against $125,000 in 1927. There is normally a good market in Ecuador for toilet preparations, considering the limited population of the country and the fact that a considerable part of the 2,000,000 population are Indians and other very poor people who do not use such products and that the general purchasing power is low. The cities of Guayaquil and Quito, each with 100,000 inhabitants, would rank in purchasing power with places of about 20,000 in the United States. Moreover, just now Ecuador is undergoing a period of severe economic depression so that it is doubtful if the present time is favorable for introducing a new line of toilet preparations. (Consul Harold D. Clum, Guayaquil).

Czechoslovakian-French Treaty

American manufacturers of toilet preparations will be interested in learning that the annex to the Czechoslovak-French commercial treaty of July 2, 1928, which went into effect on April 24, 1929, provided certain modifications in regard to the certificate requirements for cosmetics imported into Czechoslovakia. Exports of toilet preparations to Czechoslovakia in 1928 reached $38,000.

Czechoslovak importers of American cosmetics advise that they have made no effort as yet to employ the new method since the former procedure offers at present no difficulties. Each shipment of cosmetics to Czechoslovakia is now accompanied by a certificate issued by an American chemist and sworn to before a notary public.

Under the new method it would be necessary to obtain a certificate prepared by a public laboratory or a licensed chemist and have it verified by a Czechoslovak consulate in this country. Such certificates are now only required for dyes, depilatories, face paints, lip sticks, face creams, and tooth pastes. The Czechoslovak consulate after verifying such certificates will file the original certificate in the consulate and send a copy to the Czechoslovak

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Iodine, crude, 200 lb kegs...lb.	4.35	4.35	4.35	4.20	3.88
Resublimed, 10 lb tars....lb.	4.65	4.70	4.65	4.70	4.65
Tincture demis.....gal.	4.70	4.70	4.80	4.65	4.55
Iodoform, powd 10 lb bot...lb.	.....	6.00	6.00	6.00	6.00
Iron & Ammonium Citrate, USP, 50 lb cans.....lb.	.65	.66	.66	.64	.66	.64
Chloride, USP, lump 400 lb bbls.....lb.	.06	.08	.08	.06	.08	.05½
Citrate, USP, VIII 25 lb can.....lb.	.94	1.01	1.01	.94	1.01	.94
Hypophosphite, 5 lb cans..lb.	1.55	1.65	1.65	1.55	1.65	1.55
Iodide, 1 lb bottles.....lb.	.....	4.28	4.28	4.28	4.28	4.28
Phosphate, USP, 50 lb cans.....lb.	.....	.69	.69	.69	.69	.69
& Potas Oxalate, 250 lb bbl.....lb.	.....	.45	.45	.45	.49	.45
Pyrophosphate, USP, 50 lb.....lb.	.74	.80	.80	.74	.80	.74
& Sod Oxalate, 24 lb box...lb.	.....	.30	.30	.30	.30	.30
Sulfate, USP, crys bbls.....lb.	.04¼	.04	.04	.04¼	.04	.04¼
Ferrous dried bbls.....lb.	.....	.08	.08	.08	.08	.08
Valerate, tins.....lb.	2.75	3.00	3.00	2.75	3.00	2.75
Jalap Resin, USP lumps, 5 lb tins.....lb.	.....	4.00	4.00	4.00	4.00	4.00
Powdered, tins.....lb.	.....	4.65	4.65	4.65	4.65	4.65
Lead Acetate, USP, 100 lb kegs.....lb.	.15	.18	.18	.15	.18	.15
Iodide, USP, VIII 5 lb bot..lb.	3.20	3.40	3.40	3.20	3.40	3.20
Lecithin, 5 oz jars.....oz.	1.00	1.30	1.30	1.00	1.30	1.00
Licorice Ext Mass, cases...lb.	.19	.20	.20	.14	.20	.14¼
Compound powder, bbls...lb.	.11	.13	.13	.11	.13	.11
***LITHIUM CARBONATE**, 250 lb bbls.....lb.*	1.50	1.60	1.60	1.50	1.60	1.50
Citrate, USP, 100 lb kegs..lb.	.....	1.70	1.70	1.70	1.70	1.70
Iodide, 5 lb bottles.....lb.	.....	5.40	5.40	5.40	5.40	5.40
Lobeline Sulfate, ¼ oz vial...oz.	.....	8.75	8.75	8.75	8.75	8.75
Magnesium Carbonate, USP, 100 lb bbls.....lb.	.....	.10½	.12	.10½	.12	.12
English, oz blocks.....oz.	.16	.18	.18	.16	.18	.16
Glycerophosphate, 5 lb tins.....lb	3.20	3.25	3.25	3.20	3.25	3.20
Hypophosphite 5 lb cans..lb	.....	*1.05*	*1.05*	*1.05*	*1.05*	*1.05*
Salicylate, 100 lb kegs.....lb	.....	1.10	1.10	1.10	1.10	1.10
Stearate, bbls.....lb.	.23	.25	.25	.23	.25	.23
Manganese Glycerophosphate, 5 lb tins.....lb.	2.90	3.00	3.00	2.90	3.00	2.90
Hypophosphite, USP, VIII 5 lb cans.....lb.	1.35	1.40	1.40	1.35	1.40	1.35
Iodide, 1 lb bottles.....lb.	6.40	6.65	6.65	6.40	6.65	6.40
MENTHOL, USP, 60 lb cases.....*lb.*	*4.50*	*4.60*	*6.00*	*4.50*	*6.25*	*4.10*
Synthetic, cases.....lb.	3.00	3.25	3.25	3.00	3.50	3.00
Mercury Metal, 75 lb flasks...fl.	124.50	125.50	126.00	121.50	134.00	120.00
Bichloride, crys 25 lb box..lb.	.....	1.81	1.81	1.81	1.81	1.81
Gran powd, 100 lb kegs..lb.	.....	1.65	1.65	1.65	1.65	1.65
Bisulfate, 25 lb boxes.....lb.	.....	1.62	1.62	1.62	1.62	1.62
Blue Mass, 25 lb boxes....lb.	.....	1.03	1.03	1.03	1.03	1.03
Powd, 25 lb boxes.....lb.	.....	1.04	1.04	1.04	1.04	1.04
Blue Ointment, USP, 50%, 25 lb cans.....lb.	.....	1.29	1.29	1.29	1.29	1.29
Mild 30%, 25 lb cans....lb.	.....	.92	.92	.92	.92	.92
33 1/3% mercury.....lb.	.....	.94	.94	.94	.94	.94
Calomel, 50 lb boxes.....lb.	.....	2.05	2.05	2.05	2.05	2.05
English.....*lb.*	*2.75*	*2.80*	*2.75*	*2.80*	*2.75*	*2.75*
Iodide, green, 25 lb jars....lb.	.....	4.80	4.80	4.80	4.80	4.80
Red, USP, 25 lb jars...lb.	.....	4.89	4.89	4.89	4.89	4.89
Yellow, USP, VIII, 25 lb jars.....lb.	4.80	4.80	4.80	4.80	4.80	4.80
Red precip, USP, 25 lb boxes.....lb.	2.17	2.17	2.17	2.17	2.17	2.17
Powd., USP, 25 lb boxes.lb.	2.17	2.17	2.17	2.17	2.17	2.17
White precip, USP, 25 lb boxes.....lb.	.....	2.20	2.20	2.20	2.20	2.20
Powd., USP, 25 lb boxes.lb.	.....	2.25	2.25	2.25	2.25	2.25
Salicylate, 25 lb bot.....lb.	.....	2.32	2.32	2.32	2.32	2.32
With chalk, USP, 25 lb boxes.....lb.	.....	.93	.93	.93	.93	.93
Methanol, Pure 1c-1 drs...gal.	.....	.57	.57	.57	.60	.48
Methyl Salicylate, USP, 50 lb cans.....lb.	.40	.42	.45	.40	.45	.42
Methylene Blue, USP, med 5 lb cans.....lb	2.00	2.05	2.05	2.00	2.05	2.00
Milk powd, 150 lb bbls.....lb.	.14	.15	.15	.14	.15	.14
MORPHINE Alk, 5 oz tin...oz.	.....	11.35	11.35	9.85	10.15	9.85
Acetate, 5 oz tins.....oz.	.....	9.35	9.35	7.85	8.25	7.85
Hydrobromide, 5 oz tins, 10 oz lots.....oz.	.....	9.35	9.35	7.85	8.35	7.85
Hydrochloride, 5 oz tins, 10 oz lots.....oz.	.....	9.25	9.25	7.85	8.35	7.85
Ethyl Hydrochloride, 5 oz tins 10 oz lots.....oz.	.....	10.85	10.85	9.35	9.85	9.35
Sulfate, 5 oz tins, 10 oz lots.....oz.	.....	8.85	8.85	7.85	8.35	7.85
Naphthalene Flake, 175 lb bbls wks.....lb.	.04½	.05	.05	.04½	.05	.04½
Balls, 250 lb bbls wks...lb.	.05½	.06	.06	.05½	.06	.05½
Oil Mineral White, 50 ga bbls bbls 80-85 vis.....gal.	.62	.67	.67	.60	.67	.60
85-90 vis.....gal.	.65	.70	.70	.65	.70	.65
125-130 vis.....gal.	.75	.85	.92	.65	.92	.70
290 vis.....gal.	.90	1.10	1.10	.90	1.10	1.00
Russian 110-115 vis.....gal.	.70	.80	.80	.70	.75	.70
145-155 vis.....gal.	.74	.84	.89	.67	.80	.67
320-330 vis.....gal.	.82	.92	.97	.75	.95	.80
Oxgall, Purified, 5 lb bot...lb.	*1.75*	*2.50*	*2.50*	*1.75*	*2.50*	*1.75*
USP, 5 lb bot.....lb.	2.00	2.50	2.50	2.00	2.50	2.00
Oxyquinoline Sulfate, tins...lb.	8.50	9.25	9.25	8.50	9.25	8.50

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Ministry of Finance in Prague. The latter will then notify all Czechoslovak customs officers that a certificate for the product in question has been deposited in a given consulate. Such a certificate would be valid for three years. There appears to be no objection to the form of certificate at present in use, which does not have to follow very elaborate prescriptions. American exporters of cosmetics to Czechoslovakia may themselves judge whether or not they wish to adopt the new method.

U. S. Essential Oils to Brazil

American exports of essential oils to Brazil during the past seven years have had an average value of $20,000, as reported by Vice Consul Gerald A. Drew, Para. American manufacturers and exporters of essential oils and perfume materials that desire to expand this market should communicate directly with Brazilian firms, bringing out the advantages of their product over the German essences now so popular in Brazil. It is possible that in this way they might persuade some of the Brazilian importers to give their product a trial, when, if it comes up to expectations, further orders might develop. Samples should be mailed in small packages by first class mail, marking the package as follows: "Amostras sem Valor Commerical," otherwise heavy duties would be imposed.

Citronella Continues Up

Citronella Java is stronger, spot quotations being made at 71c per pound, an increase over last month's high of 5c per pound. The tendency of Citronella Java has been upward, with Ceylon also reported strong.

The exports of citronella oil from Java are discussed in a pamphlet, analyzing the present and future situation, which has been prepared by N. V. Handel-Maatschappij, "Stille Zuidzee," Amsterdam. An interesting chart of the exports since 1913 and of the prices in sterling or guilders is a feature of the leaflet. Exports during the pre-war years were not large enough to be of any weight as regards the world consumption, and the restrictions and impediments experienced in the subsequent years were such that 1923 is the first year which can be considered as a normal one. The figures since then are given in the following table:

Year	Production in tons	Average Prices Guilders per kilo	Sterling per lb. s. d.
1923	495	5.00	3 9
1924	534	6.25	4 8½
1925	827	4.55	3 5
1926	1,182	2.90	2 2
1927	1,312	2.10	1 7
1928	1,139	2.40	1 9½

The prices are based on monthly average values and represent the quotations c. i. f. to European ports. Notwithstanding the fact that the 1928 exports were less than those of 1926, the 1928 price was considerably lower than in 1926, so that the correlation of supplies could not have taken its full effect. The tone during the present year has been definitely firmer, and exports during the past eight months have been stable. Those in a position to know state that these export figures correspond with the production figures, so that stocks in Java as well as in the consuming markets are not heavy, and a more active

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Pancreatin, USP, 100 lb....lb.	.....	1.90	1.90	1.90	.....	.....
Paraffin, refd, 200 lb cs slabs 118-120 deg MP.....lb.	.08	.09	.09	.08	.09	.08
128-132 deg MP.....lb.	.07½	.07½	.07½	.07½	.07½	.07½
Para-Aldehyde, USP, 100 gal drums.....lb.	.67	.77	.77	.67	.77	.67
Pepsin, USP, 100 lbs, 1:3000.lb.	.....	2.25	2.25	2.25	2.50	2.50
100 lbs. 1:6000.....lb.	.....	4.00	4.00	4.00	5.00	5.00
100 lbs. 1:10000.....lb.	.....	6.50	6.50	6.50	8.35	8.35
Peptone, powd, 5 lb bot....lb.	.....	.....	.....	.....	.....	.....
Petrolatum, Lily White, USP 400 lb bbls.....lb.	.08	.09	.09	.08	.10	.09
Snow White, USP, 400 lb bbls.....lb.	.09½	.10	.10	.09½	.13½	.11½
PHENOLPHTHALEIN, USP, 100 lb drums.....lb.	1.10	1.20	1.20	1.10	1.20	1.10
5 lb cans 100 lb lots..lb.	1.23	1.30	1.30	1.23	1.30	1.23
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots .....oz.	.....	3.25	3.25	3.25	3.25	3.25
Nitrate, 25 oz lots.....oz.	.....	3.25	3.25	3.25	3.25	3.25
Single ounce.....oz.	.....	3.50	3.50	3.50	3.50	3.50
Alkaloid, 15 gr vials.....vl.	.....	.75	.75	.75	.75	.75
Piperazine Hydrate, 1 lb bot.lb.	.....	15.00	15.00	15.00	15.00	15.00
Piperadine, 25 oz bottles.....lb.	.....	8.00	8.00	8.00	8.00	8.00
Popodhyllin 5 lb bottles.....lb.	4.35	4.50	4.50	4.35	4.50	4.35
Potassium Acetate, USP, 100 lb kegs.....lb.	.29	.30	.30	.29	.30	.29
Bicarb, USP, crys 320 lb bbls .....lb.	.13	.13½	.13½	.08½	.09	.08½
Bromide, USP, crys 100 lb cs .....lb.	.42	.43	.40	.39	.43	.42
Citrate, USP, 50 lb bbl....lb.	.51	.53	.55	.51	.55	.51
Guaiacol Sulfonate.....lb.	1.95	2.25	2.25	1.95	2.25	1.95
Hypophosphite, 10 lb cans.lb.	.80	.85	.85	.80	.85	.80
Iodide, USP, 100 lb cases..lb.	3.25	3.30	3.55	3.25	3.80	3.25
Lactophosphate, 4 oz bot..lb.	.....	.90	.90	.90	.90	.90
Permangan, USP, crys, 100 lb drs wks.....lb.	.15	.15½	.15½	.15	.16½	.14½
Phosphate dibasic pure, kegs .....lb.	.....	.49	.49	.49	.49	.49
Salicylate, 25 lb cans....lb.	.....	1.18	1.18	1.18	1.18	1.18
Sulfate, USP, VIII, 100 lb kegs.....lb.	.13	.15	.15	.13	.15	.13
Sulfocyanide, CP 15 lb jars lb.	.....	.50	.50	.50	.50	.50
Tartrate, CP, tins.....lb.	.....	.65	.65	.65	.65	.65
Pyrogallol, USP, see Acid Pyrogallic.....	.....	.....	.....	.....	.....	.....
Quinidine Alk, 100 oz tins...oz.	.70	.75	.75	.70	.75	.70
Sulfate, 100 oz tins.....oz.	.....	.50	.50	.50	.50	.50
QUININE SULFATE, USP, 100 oz tins.....oz.	.....	.40	.40	.40	.40	.40
1 oz tins, 100 oz lots....oz.	.....	.47	.47	.47	.47	.47
Dutch, 100 oz tins.....oz.	.....	.40	.40	.40	.40	.40
Java, 100 oz. tins.....oz.	.....	.40	.40	.40	.40	.40
Japanese 100 oz tins.....oz.	.....	.40	.40	.40	.40	.40
Acetate.....oz.	.....	.78	.78	.78	.78	.78
Arsenate.....oz.	.....	.78	.78	.78	.78	.78
Benzoate.....oz.	.....	.78	.78	.78	.78	.78
Bisulfate, USP.....oz.	.....	.40	.40	.40	.40	.40
Resale.....oz.	.37	.39	.39	.37	.39	.37
Citrate.....oz.	.....	.51	.51	.51	.51	.51
Dicarbonate, 1 oz tins....oz.	.....	2.56	2.56	2.56	2.56	2.56
Dihydrobromide.....oz.	.....	.54	.54	.54	.54	.54
Dihydrochloride, USP....oz.	.....	.54	.54	.54	.54	.54
Ethyl Carbonate, 16 oz tins .....oz.	.....	.58	.58	.58	.58	.58
Ferrocyanide.....oz.	.....	.78	.78	.78	.78	.78
Formate.....oz.	.....	.73	.73	.73	.73	.73
Glycerophosphate.....oz.	.....	.80	.80	.80	.80	.80
Hydrobromide, USP.....oz.	.....	.50	.50	.50	.50	.50
Hydrochlorosulfate.....oz.	.....	.54	.54	.54	.54	.54
Hydrochloride & Urea, USP .....oz.	.....	.74	.74	.74	.74	.74
Hypophosphite.....oz.	...	.70	.70	.70	.70	.70
Lactate.....oz.	.....	.66	.66	.66	.66	.66
Phenolsulfonate.....oz.	.....	.78	.78	.78	.78	.78
Phosphate.....oz.	.....	.62	.62	.62	.62	.62
Salicylate, USP.....oz.	.....	.52	.52	.52	.52	.52
Tannate, USP.....oz.	.....	.41	.41	.41	.41	.41
Tartrate.....oz.	.....	.78	.78	.78	.78	.78
Valerate.....oz.	.....	.78	.78	.78	.78	.78
& Urea Hydrochloride, USP .....oz.	.....	.88	.88	.88	.88	.88
Rennet, N. F. 5 lb 1:25,000...lb.	2.95	3.50	3.50	2.95	3.50	2.95
Resorcinol, USP, 25 lb cans..lb.	1.60	1.65	1.75	1.65	2.00	1.70
Rochelle Salt, USP, 225 lb bbl .....lb.	.23	.23½	.23½	.23	.23½	.23
Imp. USP, 300 lb bbls.....lb	.....	.23	.23	.23	.23	.23
Rock Sugar, 5 lb boxes.....lb.	.....	.15	.15	.15	.15	.15
Saccharin, USP, 10 lb cans...lb.	1.70	1.80	1.80	1.70	1.80	1.70
USP, Soluble, 10 lb cans...lb.	1.75	1.85	1.85	1.75	1.85	1.75
Salicin, USP.....lb.	.....	9.31	9.31	4.86	4.86	4.86
SALOL, USP, 100 lb drums..lb.	.....	.90	.90	.90	.90	.90
Saltpetre, powd, bbls wks....lb.	.06¼	.08¼	.08¼	.06¼	.08¼	.06¼
Santonin, USP, bulk.....lb.	.....	129.50	129.50	129.50	145.00	129.50
Saponin, refined.....lb.	1.30	1.50	1.50	1.30	1.50	1.30
Siedlitz Mixture, 250 lb bb..lb.	.....	.....	.....	.....	.....	.....
Silver Metal, American.....oz.	.....	.57½	.57½	.57½	.60½	.57½
Iodide, 16 oz lots.....oz.	.....	.69	.69	.69	.69	.69
Nitrate, 100 oz bottles....oz.	.40½	.42½	.42½	.40½	.45	.40½
Nucleinate, bulk.....oz.	.....	.37	.37	.37	.37	.37
Proteinate.....oz.	.....	.32	.32	.32	.32	.32
Soap Castile, 50 lb boxes....lb.	.....	.25	.25	.25	.25	.25
USP, powd, 250 lb bbls....lb.	.28	.30	.30	.28	.30	.28
USP, green, 450 lb bbls....lb	.07½	.07½	.07½	.07½	.07½	.07½

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demand would cause a shortage. No one is rash enough to predict with confidence what the ultimate level of prices will be, but a prophetic estimate by an expert foreshadows a steady advance, with possible fluctuations. The comparison of the output and value in 1926 with statistics for the first few months of this year are definitely in support of this view.

More Essential Oils Imported

Essential oil import statistics for 1929 show many interesting changes. The total value of essential oils imported during the first seven months of 1929 amounted to $4,697,000, against $4,260,366 for a similar period during 1928. Geranium, attar of roses, and bergamot all registered decreases in both quantity and value. These decreases were particularly noticeable in the first two.

Cassia and cinnamon, lavender and spike lavender and sandalwood all registered substantial increases in both quantity and value as did those oils enumerated under the general classification, "all other essential and distilled oils." While representing the smallest quantity and value of any of the oils under discussion, it is of interest to note that sandalwood oil imports were more than double in quantity and quadruple in value. Citronella and lemon grass oil showed a quantity decrease of 10 per cent. but an increase in value of $9,000. The citrus oils, lemon and orange, came in for the greatest interest in that the former shows a decrease of approximately 132,000 pounds and an increase in value of $83,000, and the latter a decrease of approximately 7,000 pounds and an increase in value of $136,000. The following table shows the quantities of essential oil imports for the first seven months of 1928 and 1929:

	7 months	
	1928	*1929*
	Pounds	*Pounds*
Cassia and cinnamon	159,207	226,909
Geranium	146,823	43,798
Attar of roses	19,652*	10,878*
Bergamot	74,066	68,005
Citronella and lemon grass	923,824	818,830
Lavender and spike lavender	122,770	176,544
Lemon	413,803	281,523
Orange	137,070	130,261
Sandalwood	6,907	15,579
Other essential and distilled oils	1,939,225	2,949,777

*Ounces.

Essential oil distillers are optimistic as to business this season as there are no considerable stocks in the hands of buyers. The rose crop is plentiful and the blossoms fine. New essence absolute is quoted at $111 per pound.

The comparative statistics of declared exports to the United States of the most important essential and distilled oils for the second quarter of 1929 as against 1928 through the port of Nice were $166,752 and $253,590, respectively. Geranium oil exports increased from 2,038 pounds, value $8,382 to 5,466 pounds, value $19,093; jasmine from 53 pounds, valued at $16,618, to 181 pounds, value $38,724; lavender from 21,188 pounds, valued at $63,981, to 42,796 pounds, valued at $129,403, in fact nearly all oils recorded an increase excepting tuberose, thymes and rose.

The reason for general increase in exports is given as being the anticipated rise in the United States tariff on essential oils used in perfumery. (Vice Consul J. R. Robinson, Nice).

	Current Market	1929 High	1929 Low	1928 High	1928 Low
SODIUM BENZOATE, USP, 100 lb bbls. lb.	.45	.49	.45	.55	.50
Bromide, USP, 100 lb kegs. lb.	.42	.43	.42	.43	.42
Cacodylate, USP, 25 lb bot. lb.	4.75	5.90	4.75	6.10	4.75
Citrate, USP, X 50 lb kegs. lb.	.45	.47	.45	.47	.45
USP VIII, 50 lb kegs. lb.	.38	.40	.38	.40	.38
Glycerophosphate, USP, crys 25 lb cans. lb.	1.40	1.55	1.40	1.55	1.40
Powder, 25 lb tins. lb.	1.45	1.60	1.45	1.60	1.45
Soln, USP, 25 lb tins. lb.	1.05	1.20	1.05	1.20	1.05
Hypophosphite, USP, 25 lb cans. lb.	.70	.75	.70	.75	.70
Iodide, USP, 25 lb jars. lb.	4.25	4.30	4.25	4.30	4.25
Phosphate (Mono-Sodium), 100 lb kegs. lb.	.30	.31	.30	.31	.30
Di-Sodium USP, granular, 275 lb bbls. lb.	.07¼	.08	.07¼	.08	.07¼
Pyrophosphate, 100 lb kegs. lb.	.....	.29	.29	.29	.29
Salicylate, 100 lb kegs. lb.	.....	.47	.47	.47	.47
Silicate, 41 drums. lb.	.....	.01½	.01½	.01½	.01½
47 drums. drm.	.....	12.00	12.00	12.00	12.00
Sulfocarbolate, USP, 100 lb kegs. lb.	.....	.31	.31	.31	.31
Sulfocyanate, CP crys, jars included. lb.	.....	.60	.60	.60	.60
Spartein Sulfate, USP, 25 oz bulk. oz.	.65	.70	.70	.60	.70	.60
Single oz vial. oz.	.77	.90	.90	.77	.90	.77
Starch Rice, 140 lb bags. lb.	.09	.10	.10	.09	.10	.09
STRONTIUM BROMIDE USP, 50 lb kegs. lb.	.51	.52	.52	.51	.52	.51
Carb, 100 lb kegs wks. lb.	.....	.20	.20	.20	.20	.20
Iodide, USP, 25 lb jars. lb.	.....	4.00	4.00	4.00	4.00	4.00
Lactate, kegs. lb.	.90	1.10	1.10	.90	1.10	.90
Nitrate, 600 lb bbls NY. lb.	.08	.08½	.08½	.08	.08½	.08
Imp. bbls NY. lb.	.08	.08½	.08½	.08	.08½	.08
Salicylate, USP, 100 lb keg lb.	.....	1.10	1.10	1.10	1.10	1.10
Strophanthin, USP, 1 oz vial oz.	.....	19.00	19.00	19.00	19.00	19.00
Crystals. lb.	.....	75.00	75.00	75.00	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins. oz.	.....	.66	.66	.66	.66	.56
Powdered. oz.	.....	.56	.56	.56	.56	.46
Acetate. oz.	.....	.65	.65	.65	.65	.55
Arsenate, 25 oz cans. oz.	.....	.65	.65	.65	.65	.55
Glycerophosphite, USP. oz.	.....	.65	.65	.65	.65	.55
Hydrobromide. oz.	.....	.65	.65	.65	.65	.55
Hydrochloride. oz.	.....	.65	.65	.65	.65	.55
Hypophosphite. oz.	.....	.75	.75	.75	.75	.65
Nitrate, USP. oz.	.55	.72	.72	.55	.72	.52
Phosphate. oz.	.....	.65	.65	.65	.65	.55
Sulfate, USP, crys, powd. oz.	.46	.56	.56	.46	.56	.38
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90	5.90	5.80	5.90	5.80
Milk, USP, 200 lb bbls. lb.	.18	.20	.20	.18	.20	.18
Sulfonethylmethane, USP, 10 lb boxes. lb.	3.85	4.05	4.05	3.85	4.05	3.85
Sulonmethane, USP, 10 lb box. lb.	2.65	3.85	3.85	2.65	3.85	2.65
Sulfur flwrs. washed, USP, 125 lb bbl. lb.	.....	.06	.06	.06	.06	.06
Iodide, USP, VIII, 5 lb bot lb.	.....	4.55	4.55	4.55	4.55	4.55
TARTAR EMETIC, USP, 300 lb bbls. lb.	.29	.31	.31	.29	.36	.32½
Terebene, tins. lb.	.....	.85	.85	.85	.85	.85
Terpin Hydrate, USP, 100 lb kegs. lb.	.40	.42	.42	.40	.47	.40
Theobromine Alk, 5 lb cans. lb.	1.90	2.25	2.25	1.90	2.25	1.90
Sod. Salicylate, 1 lb bot. lb.	.....	2.10	2.10	2.10	2.10	2.10
Sod. Benzoate, 1 oz vials. oz.	.....	1.00	1.00	1.00	1.00	1.00
Thymol, USP, 25 lb tins. lb.	2.55	2.70	2.70	2.25	2.75	2.25
Iodide kegs. lb.	6.00	7.00	7.00	6.00	7.00	6.50
Veratrine Alkaloid. oz.	.....	2.25	2.25	2.25	2.25	2.25
Sulfate, 1 oz vials. oz.	.....	2.25	2.25	2.25	2.25	2.25
Witch Hazel Ext., 50 gal bbl. gal.	.80	1.00	1.00	.80	1.00	.80
Zinc Carb, USP, 100 lb keg. lb.	.28	.31	.31	.28	.31	.28
Chloride, USP, 25 jars ex. lb.	.24	.29	.29	.24	.29	.24
Iodide, 5 lb bottles. lb.	.....	5.22	5.22	5.22	5.22	5.22
Oxide, USP, 100 lb bbls. lb.	.16½	.17½	.18	.16½	.18	.17
Stearate, USP, 50 lb bbl. lb.	.24	.26	.26	.24	.26	.22
Sulfate, USP, 100 lb bbl. lb.	.08	.09	.09	.08	.09	.08
Sulfocarbolate, 100 lb kegs. lb.	.23	.29	.29	.23	.29	.29

Natural Derivatives

Anethol, 2 lb bot. lb.	1.25	1.30	1.30	1.25	1.30	1.25
Borneol, 1 lb bot. lb.	2.40	2.50	2.50	2.40	2.60	2.40
Carvol, 5 lb bot. lb.	3.50	3.60	3.60	3.50	2.85	3.50
Citral, 25 lb cans. lb.	2.70	2.75	2.75	2.70	2.75	2.70
Citronellal 1 lb bot. lb.	2.70	2.75	2.75	2.70	3.25	2.70
Eucalyptol, USP, 50 lb cans. lb.	1.00	1.05	1.05	1.00	1.05	1.00
Eugenol, USP, 25 lb cans. lb.	2.70	2.75	2.75	2.70	2.90	2.70
Geraniol, domestic, 50 lb cases. lb.	2.50	2.70	2.70	2.50	2.70	2.50
Imported, 5 lb bot. lb.	2.90	3.10	3.10	2.90	3.10	2.90
Iso-Eugenol, 1 lb bot. lb.	3.75	3.80	3.80	3.75	4.50	3.75
Imported, 1 lb bot. lb.	3.70	3.80	3.80	3.70	3.80	3.70
Linalol from Bois de Rose, 5 lb bot. lb.	3.20	3.25	3.25	3.20	3.25	3.00
Rhodinol, 1 lb bot. lb.	7.50	7.75	7.75	7.50	7.75	6.00
Saffrol, drums. lb.	.....	.27	.27	.27	.27	.27
60 lb cans. lb.	.....	.29	.29	.29	.29	.29

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Aromatic Chemicals

{ Monthly Review }

Synthetic Aromatic Chemicals

Imported for consumption in the United States during August amounted to 12,903 pounds, value $19,996 compared with 12,145 pounds, valued at $21,536 during August, 1928. Total imports, entered for consumption during the first eight months of the calendar year, were 93,398 pounds, valued at $128,326 against 95,019 pounds, value $133,940 entered for consumption during the period January-August, inclusive, 1928.

Among the aromatics listed in the August, 1929 imports for consumption were 2,714 pounds of ambrogene, 1,546 pounds of benzyl acetate, 1,100 pounds of benzyl benzoate, 1,482 pounds of phenyl ethyl alcohol and 1,343 pounds of vanillin.

New Lavender from Australia

An Englishman after seven year's pioneering in the cultivation of the lavender plant, is now offering his product for sale in Australia and New Zealand with the intention of selling later in the export trade generally. At the present time, he has 16 acres under cultivation and last year's output was absorbed in Tasmania, although forward orders are being booked on the mainland.

It is reported in the trade that an essential oil analyst in London pronounced the Tasmania product to be not only pure officinalis but of a high quality, having a percentage of 44.1. It is reported that at present one and one-half tons of flowers are handled a week, it requiring one ton to produce 20 pounds of oil of lavender. The next harvest will be in January-April, 1930. (Trade Commissioner S. R. Peabody, Melbourne).

Lavender oils are in a firm position. Early reports indicated that the unusually cold weather might have had a bad effect upon the lavender flowers but this has now been contradicted by the results. A normal crop was grown of very fine quality with the percentage of high test oil very good. Better prospects for good oil with the market in a nice position for consumers may be looked for this year.

Anise is in a firm position with quotations being made at 80c for the technical grade and 85c per pound for U.S.P. The firmness in this commodity is attributed to the fact that the last crop was not so good and the new crop is not yet available. There is a possibility of slightly higher figures prevailing until the new crop begins to arrive.

Bergamot is weaker, a buyer's market prevailing in this commodity. Demand being light and supplies plentiful there is every likelihood that on a large inquiry there would be shading of prices. Replacement prices also were lower.

Menthol is lower on spot, quotations being made at $4.50 and $4.60 as to quantity, a reduction of 35c per lb. over the high price of last month. Menthol has been weak for some time and the tendency seems to be unchecked. This is partly a reflection of lower prices abroad and also a rather dull market here. Dealers, however, report that stocks on hand for spot delivery are not large.

Synthetic Aromatics

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Acetophenene, CP, 1 lb bot..lb.	3.50	3.65	3.65	3.50	3.75	3.50
Aldehyde, C 8 (Otcyl) 1 lb bot ....lb.	.....	50.00	55.00	50.00	55.00	55.00
C 7, 1 lb bot.....lb.	4.50	5.50	5.50	4.50	5.50	4.50
C 9 (Nonyl), 1 lb bot ....lb.	.....	140.00	140.00	140.00	140.00	140.00
C 10 (Decyl), 1 lb bot....ib.	.....	48.00	48.00	48.00	48.00	48.00
C 14, 1 lb bot.....lb.	.....	32.00	32.00	22.50	25.00	22.50
C 16, 1 lb bot.....lb.	.....	24.00	32.00	24.00	80.00	31.00
Aubepine, see Anisic Aldehyde						
AMYL ACETATE, pure, 5 gal cans.....gal.	5.50	6.85	6.85	4.75	5.50	4.75
Butyrate, 1 lb bot.....lb.	1.70	1.75	1.75	1.70	1.90	1.70
Butyrate, 5 lb bot.....lb.	.....	1.75	1.75	1.75	1.75	1.75
Cinnamate, 5 lb bot.....lb.	9.50	9.75	9.75	9.50	9.75	9.50
Formate, 1 lb bot.....lb.	.....	1.90	1.90	1.90	1.90	1.90
Formate, 5 lb bot.....lb.	.....	1.75	1.75	1.75	1.75	1.75
Phenyl Acetate, 1 lb bot...lb.	4.50	5.00	5.00	4.50	5.00	4.50
Salicylate, 100 lb cbys.....lb.	1.25	1.30	1.30	1.25	1.30	1.25
Imported.....lb.	2.25	2.50	2.50	2.25	2.50	2.25
Anisic Aldehyde, 1 lb bot....lb.	3.00	3.25	3.25	3.00	3.25	3.00
Benzaldehyde, USP, 40 lb cbys .....lb.	.....	.....	.....	.....	.....	.....
50 lb cbys.....lb.	1.25	1.35	1.35	1.25	1.35	1.25
FFC, 40 lb cbys.....lb.	1.35	1.45	1.45	1.35	1.45	1.35
Benzoic Ether, see Ethyl Benzoate.....						
Benzophenone, 1 lb bot.....lb.	4.50	5.00	5.00	4.50	5.00	4.50
Benzyl Acetate, 100 lb cbys..lb.	.90	1.10	1.10	.90	1.10	.90
Alcohol, 5 lb bot.....lb.	1.25	1.35	1.35	1.25	1.35	1.25
Benzoate, 5 lb bot.....lb.	1.05	1.15	1.35	1.05	1.35	1.25
BENZYL BENZOATE.....	1.35	1.40	1.40	1.35	1.40	1.35
Medicinal, FFC.....lb.	.....	1.40	1.40	1.40	1.40	1.40
Buytrate, CP, 1 lb bot....lb.	9.25	9.50	9.50	9.25	9.50	9.25
Cinnamate, 1 bot.....lb.	9.25	9.50	9.50	9.25	9.50	9.25
Formate, 1 lb bot.....lb.	3.15	3.25	3.25	3.15	3.75	3.15
Propionate, 1 lb bot.....lb.	3.60	3.75	3.75	3.60	3.75	3.60
Succinate, 1 lb bot.....lb.	5.25	5.50	5.50	5.25	5.50	5.25
Valerate, 5 lb bot.....lb.	3.00	3.25	3.25	3.00	3.25	3.00
Bornyl Acetate, 1 lb bot....lb.	2.90	3.00	3.00	2.90	3.25	2.90
Bromstyrol, 25 lb cases.....lb.	4.10	4.25	4.25	4.10	5.00	4.10
Butyl Anthranilate dom, 1 lb bot.....lb.						
Butyric Ether, see Ethyl Butyrate.....						
Cinnamic Acid, 5 lb cans....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Alcohol liquid, 1 lb bot...lb.	3.25	3.35	3.35	3.25	3.50	3.25
Crystallizable.....lb.	7.00	8.00	8.00	7.00	8.00	7.00
Aldehyde.....lb.	2.25	2.50	2.50	2.25	2.50	2.25
Imported, 1 lb bot.....lb.	7.75	9.00	9.00	7.75	9.00	7.75
Citronelyl Acetate, 1 lb bot..lb.	7.75	8.00	8.00	7.75	8.00	7.75
Coumarin, 25 lb cans.....lb.	3.50	4.00	4.00	3.50	4.00	3.50
DECYL ALCOHOL.....lb.	25.00	28.00	28.00	25.00	28.00	25.00
Diethyl Phthlate see Chemicals						
Diphenyloxide, 25 lb tins....lb.	1.00	1.15	1.15	1.00	1.15	1.00
Diphenyl Methane.....lb.	1.50	1.75	1.75	1.50	1.75	1.50
Duodecyl Alcohol.....lb.	20.00	22.00	22.00	20.00	22.00	20.00
Ethyl Acetate, pure, 5 lb bot.lb.	.45	.50	.50	.45	.50	.45
Benzoate, 5 lb bot.....lb.	1.50	1.75	1.75	1.50	1.75	1.50
Ethyl Butyrate, 5 lb bot....lb.	1.80	2.00	2.00	1.80	2.00	1.80
Caproate, 1 lb bot.....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Cinnamate, 1 lb bot.....lb.	4.00	4.50	4.50	4.00	4.50	4.00
Formate, 5 lb bot.....lb.	1.00	1.25	1.25	1.00	1.25	1.00
Methyl Paracresol, 1 lb bot .....lb.	3.25	3.50	3.50	3.25	3.50	3.25
Phenyl Acetate, 5 lb bot..lb.	3.75	4.00	4.00	3.75	4.00	3.75
Valerate, 5 lb bot.....lb.	.....	3.75	3.75	3.75	3.75	3.75
Salicylate, 5 lb bot.....lb.	1.95	2.00	2.00	1.95	2.10	1.95
Formic Ether see Ethyl Formate						
Geranyl Acetate, 1 lb bot....lb.	3.20	3.25	3.25	3.20	3.25	3.20
Butyrate, 1 lb bot.....lb.	13.00	13.50	13.50	13.00	13.50	13.00
Formate, 1 lb bot.....lb.	12.00	12.50	12.50	12.00	12.50	12.00
Glyco Ester.....lb.	.90	1.00	1.00	.90	1.00	.90
Heliotropin, 100-10 lbs.....lb.	1.65	1.75	1.75	1.65	1.75	1.65
Imported.....lb.	1.95	2.05	2.05	1.95	2.05	1.95
Hydroxycitronellal, 1 lb.....lb.	5.50	7.50	7.50	5.50	7.50	5.50
Indol, CP, 1 oz bot.....oz.	2.90	3.00	3.00	2.90	4.50	2.90
IONONE, 1 lb bot 100%...lb.	5.00	6.00	6.00	5.00	7.00	5.00
Alpha.....lb.	4.80	5.00	5.20	4.80	6.25	4.75
Beta.....lb.	5.70	5.75	5.75	5.70	7.25	5.50
Methyl.....lb.	5.75	6.00	6.00	5.75	7.25	5.75
Iso Borneol.....lb.	2.15	2.25	2.25	2.15	2.25	2.15
Iso Bornyl Acetate.....lb.	2.80	3.00	3.00	2.80	3.00	2.80
Iso-Butyl Benzoate, 5 lb bot..lb.	2.75	3.00	3.00	2.75	3.00	2.75
Iso-Safrol, 1 lb bot imp.....lb.	1.65	1.75	1.75	1.65	1.75	1.65
Domestic, 5 lb bot.....lb.	3.50	3.75	3.75	3.50	3.75	2.50
Lynalyl Acetate, 1 lb bot....lb.	3.25	4.25	4.25	3.25	4.50	3.25
Benzoate, 1 lb bot.....lb.	13.00	14.00	14.00	13.00	14.00	13.00
Formate, 5 lb bot.....lb.	10.50	12.00	12.00	10.50	12.00	10.50
METHYL ACETOPHENONE .....lb.	3.35	3.50	3.50	3.35	3.75	3.35
Anthranilate, 1 lb bot.....lb.	2.40	2.45	2.45	2.40	2.45	2.40
Imported.....lb.	2.70	2.75	2.75	2.70	2.75	2.70
Anthranilic Acid.....lb.	11.75	12.00	12.00	11.75	12.00	11.75
Benzoate, 5 lb bot imp....lb.	1.75	1.85	1.85	1.75	2.00	1.75
Domestic, 5 lb bot.....lb.	1.75	2.00	2.00	1.75	2.00	1.75
Cinnamate, 1 lb bot.....lb.	3.75	4.25	4.25	3.75	4.25	3.75
Heptenone, 1 lb bot.....lb	8.50	9.00	9.00	8.50	9.00	8.50
Paracresol, 1 lb bot.....lb	4.50	8.00	8.00	4.50	8.00	4.50
Phenylacetate, 5 lb bot...lb	3.75	4.00	4.00	3.75	4.00	3.75
Salicylate, USP, 500 lb dr .lb.	.....	.40	.40	.40	.40	.40
50 lb cases.....lb.	.....	.42	.42	.42	.42	42
Mirbane rect. 1,000 lb drs...lb.	.12	.13	.13	.12	.13	12

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{ Monthly Review }

Lemon and Orange Continue Down

The citrus oils are weaker with Messina lemon oil leading the decline. Spot stocks were quoted at $3.35 for the Italian oil and $3.00 for the Californian. Orange oil is also weaker but not to the extent of the lemon. An abundance of both is the reason for recessions in the price.

Imports of lemon oil for July amounted to 16,326 pounds, valued at $52,610, bringing the total for the first seven months of 1929 up to 281,525 pounds, valued at $933,000. Exports of lemon oil are not separately shown. Imports of orange oil for July amounted to 11,725 pounds, valued at $44,007, bringing the total for the first seven months of 1929 up to 130,261 pounds, valued at $619,200. Exports of orange oil for July amounted to 2,974 pounds, valued at $7,872, bringing the total for the first seven months of 1929 up to 37,923 pounds, valued at $138,230. Imports of lemon and orange oil for 1927 and 1928 are shown in the following table:

	1927		1928	
	Pounds	*Value*	*Pounds*	*Value*
Lemon oil	399,698	$723,083	477,151	$1,136,532
Orange oil	204,209	495,132	195,966	709,498

It is particularly interesting to note that notwithstanding American production, imports of orange oil are practically idential with those of the first seven months of 1928 (137,070 pounds, $483,399); the import value, however, has increased over 25 per cent.

While the import value of lemon oil for the first 7 months of 1929 exceeded the 1928 value by only $83,000; there was a decrease in quantity amounting to 132,278 pounds, this indicating an import value for the first seven months of 1929 of $3.31 per pound, against $2.05 per pound for a similar period during 1928.

Orange Oil from Mexico

The first shipment of Mexican orange oil, valued at $750, was exported in 1928. In January, 1929, a further shipment of 1,326 pounds, valued at $1,989, was made. The oil was produced as a by-product from factory making orange juice and operated by a foreign company. This is the only factory that has ever produced orange oil for for foreign trade, but it is not operating at present. No lemon or lime oil has been made in the State of Jalisco, Mexico, for foreign trade. (Consul Raleigh A. Gibson, Guadalajara).

Peppermint Eases Somewhat

Peppermint oil is lower being quoted spot at $3.70 per pound. Last month's high quotation was $3.95 with the tendency strong due to reports that crops would be 30 per cent. to 40 per cent. below that of last year. The producers, however, have been unable to back up this prediction, the crop being better than at first anticipated. The carry over stocks from last year are reported to be fairly large, so that with the crop reports more optimistic, prices have tended to become easier. This does not mean, however, that there is any weakness indicated in the situation; the large dealers reporting that no further recessions are looked for.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Musk Ambrette 1 lb cans...lb	6.50	6.75	6.50	6.75	6.50
Ketone 1 lb cans...lb	8.00	8.15	8.00	8.15	8.00
Xylene 5 lb cans...lb.	2.25	2.35	2.25	2.35	2.25
Nerolin 1 lb cans...lb.	1.35	1.40	1.35	1.50	1.35
Octyl Alcohol 1 lb bot...lb.	30.00	32.00	30.00	32.00	30.00
Oenanthic Ether lb bot...lb.	1.90	2.00	1.90	2.00	1.90
Paracresol Methyl Ether...lb.	6.50	6.75	6.50	6.75	6.50
Paracresyl Acetate...lb.	5.50	5.75	5.50	5.75	5.50
Para Cymene Refd 110 gal dr ...gal.	2.25	2.50	2.25	2.50	2.25
PHENYLACETALDEHYDE					
50% 1 lb bot...lb.	4.75	5.00	4.75	7.50	4.75
Imported 50%...lb.	4.75	5.00	4.75	6.50	4.75
100%...lb.	8.00	8.25	8.00	8.25	8.00
Phenylacetic Ac d 1 lb bot..lb.	3.00	3.25	3.00	3.25	3.00
Phenyl Diacetate 1 oz bot...oz.	3.00	3.25	3.00	3.25	3.00
1 lb bot...lb.	8.00	10.00	8.00	10.00	8.00
Imported...lb.	7.00	7.75	7.00	7.75	7.00
Phenylethyl Alcohol 1 lb bot.lb.	4.50	4.75	4.50	4.75	4.50
Phenyl Ethyl Acetate...lb.	8.25	8.75	8.25	8.75	8.25
Butyrate 1 lb bot...lb.	15.00	16.00	15.00	16.00	15.00
Formate, 1 lb bot...lb.	19.00	21.00	19.00	21.00	19.00
Propionate, 1 lb bot...lb.	16.00	18.00	16.00	18.00	16.00
Valerate, 1 lb bot...lb.	19.00	20.00	19.00	20.00	19.00
Phenylpropylalcohol, 1 lb bot ...lb.	12.00	12.50	12.00	16.00	12.00
Skatol, 1 oz bot...lb.	4.50	7.00	4.50	7.00	4.50
Terpinyl Acetate, 25 lb cans..lb.	.75	.80	.75	.80	.75
Imported, 25 lb cans...	.85	.90	.85	.90	.85
TERPINEOL, CP, 1000 lb drs ...lb.	.33	.35	.33	.35	.33
50 lb cans...lb.	.37	.39	.37	.39	.37
Absolute, 25 lb cans...lb.	.48	.50	.48	.50	.48
Imported, 25 lb cans...lb.	.58	.60	.58	.60	.58
Vanillin, USP, 25 lb tins...lb.	.....	7.00	7.00	7.50	7.00
1 lb cans...lb.	.....	7.15	7.15	7.70	7.15
Second Hands...lb.	.....	6.75	6.75	6.75	6.75
Valerianic Ether see Ethyl Valerate...					
Yara Yara, 1 lb cans...lb.	1.50	1.60	1.60	1.50	1.60	1.50

Essential Oils

Almond Bitter, USP, 5 lb bot lb.	2.75	2.85	2.85	2.70	2.80	2.70
Bitter, ffPA, 5 lb bot...lb.	3.00	3.10	3.10	3.00	3.25	3.00
Sweet, 50 lb cans...lb.	.73	.76	.85	.73	.85	.75
Amber crude, 25 lb tins...lb.	.33	.35	.35	.33	.35	.33
Rectified, 25 lb tins...lb.	.52	.55	.55	.52	.55	.52
Angelica Root, 1 lb bot...lb.	21.00	23.00	24.00	21.00	28.50	16.00
Anise Tech, 400 lb drums...lb.	.80	.85	.85	.55	.58	.54
USP, 60 lb cans...lb.	.85	.86	.86	.58	.61	.57
Apricot Kernel, 50 lb cans...lb.	.40	.42	.46	.40	.50	.44
Bay, 25 lb tins N. F. V., 50.55% Phenol...lb.	2.40	2.60	3.00	2.30	3.00	1.90
Terpeneless...lb.	5.80	6.00	6.00	5.80	6.00	5.80
BERGAMOT, 25 lb coppers..lb.	4.00	4.40	5.35	4.00	6.10	4.85
Terpeneless...lb.	14.00	18.00	18.00	14.00	18.00	14.00
Artificial, 25 lb cans...lb.	2.50	3.25	3.25	2.50	3.25	2.50
Birch, Sweet, Northern, 25 lb tins...lb.	3.75	4.00	4.00	3.75	4.00	3.75
Southern, 25 lb tins...lb.	.....	1.95	1.95	1.95	1.95	1.95
Birch Tar, rect., 5 lb bot...lb.	.50	.55	.55	.50	.55	.50
Crude, 50 lb tins...lb.	.12	.13	.13	.12	.13	.12
Bois de Rose, tins...						
Brazillian...lb.	1.55	1.60	1.70	1.55	2.00	1.80
Cayenne, tins...lb.	1.90	2.00	2.35	1.90	2.60	2.05
Cade, 25 lb cans...lb.	.25	.27	.27	.25	.27	.25
Cajuput, native, 50 lb tins..lb.	.83	.88	.88	.70	.75	.70
Calamus, 5 lb bot...lb.	3.40	3.50	3.50	3.40	3.50	3.40
Camphor Sassa, 1000 lb drs..lb.	.35	.36	.36	.14½	.15½	.14½
White, 400 lb drs...lb.	.40	Nom.	.40	.10½	.12½	.10½
Cans, 50 lbs...lb.	.35	Nom.	.35	.14	.15	.14
CANANGA, Native 25 lb tins ...lb.	2.90	3.15	3.25	2.90	3.50	3.00
Rectified, 25 lb tins...lb.	3.40	3.50	3.50	3.40	4.00	3.40
Caraway, USP...lb.	1.85	1.95	2.00	1.65	1.85	1.65
Cardamon, NF, 1 lb bot...lb.	25.00	38.00	38.00	25.00	38.00	25 00
Cascarilla, USP, 1 lb bot...lb.	75.00	90.00	90.00	50.00	64.00	50.00
Cassia, 80.85%, 400 lb drs..lb.	.....	Nom.	.....	.....	1.45	1.30
Redist, USP, 50 lb cans...lb.	1.50	1.55	2.10	1.50	3.25	1.70
Cedar Leaf, 50 lb tins...lb.	1.00	1.05	1.05	.95	1.35	.90
Cedar Wood, light, 1000 lb drs ...lb.	.25	.27	.28	.25	.29	.24
Celery, 1 lb bot...lb.	.....	7.75	7.75	7.75	8.50	7.25
Chaulmoogra, USP 80 lb cases lb	.....	1.50	1.50	1.20	1.20	1.20
Cinnamon Ceylon, 1 lb bot...lb.	9.50	13.00	13.00	9.50	13.00	9.75
Leaf, 5 lb bot...lb.	1.85	1.95	1.95	1.60	1.75	1.60
CITRONELLA Ceylon, 1000 lb drs...lb.	.49	.50	.50	.44	.56	.33
50 lb tins...lb.	.50	.51	.51	.46	.58	.35
Java, 400 lb drs...lb.	.71	.76	.76	.49	.51	.40
50 lb tins...lb.	.73	.78	.78	.52	.54	.43
Cloves, USP, 50 lb cans...lb.	2.20	2.25	2.70	2.20	2.65	1.25
6 lb bot...lb.	2.45	2.50	2.90	2.45	2.75	1.35
Copaiba...lb.	.....	.65	.80	.65	.80	.65
Coriander, USP, 10 lb bots..lb.	7.00	7.50	11.25	7.00	14.00	10.50
Croton USP, 25 lb tins...lb.	1.70	1.75	1.75	.90	.95	.90
Cubebs, USP, 5 lb bot...lb.	2.90	3.00	3.00	2.90	3.45	2.90
Cumin, 1 lb bot...lb.	.....	3.75	3.75	3.75	3.75	3.75
Dill, 25 lb cans...lb.	3.75	3.85	3.85	3.75	4.25	3.75
Erigeron, 20 lb tins...lb.	1.80	1.90	1.90	1.80	2.50	1.80
EUCALPYTUS Austl, USP, 56 lb cans, cases...lb.	.51	.52	.60	.51	.60	.59
500 lb drs...lb.	.50	.51	.59	.50	.59	.58

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{ Monthly Review }

Sandalwood Forest Depletion

Sandalwood oil continues to advance and is now quoted at $8.75 per pound. There appears to be no prospect of relief as indicated by the report issued by the Forest Department, Madras Presidency, for the year 1927-1928. The report, which follows in part, indicates that reckless extraction of immature trees is taking place in Madras with no regard to future supplies:

"A total quantity of 677 tons of sandalwood was sold and realized Rs. 924,295. The sales took place as usual at Tirupattur, Vellore and Satyamangalam, the quantities sold at the respective places being 418½ tons, 53½ tons and 205 tons. The average price realized for all classes during the year was Rs. 1,365 per ton, against Rs. 1,286 per ton realized in the previous year. The year's output though smaller than that of the previous year by 47 tons, is yet far in excess of the ordinary possibility of the forests. This, as was explained last year, is due to the necessity of extracting trees killed by spike disease. Investigations relating to this obscure disease are being undertaken by the Institute of Science at Bangalore, and field experiments are in hand in North Salem division. Since the disease kills young and old trees indiscriminately, much of the sandalwood revenue comes inevitably from trees which normally would be too young and small to exploit. This unfortunate but inevitable extraction of immature trees must, in the course of time, result in a serious depletion of stock with a corresponding fall in the revenue from sandalwood. Fortunately sandalwood regenerates itself readily from seed, and nature is everywhere displaying a firm determination to spread the species, while the department is fully alive to the necessity of supplementing nature's efforts by artificial means."

Rose and Lime from Martinique Up

Rosewood oil and lime oil exports from Martinique show an increase. Exports of rosewood oil from Martinique to the United States increased from 2,355 pounds, valued at $482 in 1927 to 50,100 pounds, valued at $12,400, in 1928. Rosewood oil shipments were not in reality of Martinique origin but consisted of imports from French Guiana, Martinique being merely the shipping point for the products of that colony. There were slightly higher shipments of lime oil to the United States in 1928, owing to better crop conditions. The figures for lime oil exports follows: 1927—628 pounds, value $2,785; 1928—1,729 pounds, value $4,100. (Consul W. S. Reineck, Martinique).

Ambergris, in the amount of 78½ ounces, has been recovered from the sea in the vicinity of Lamu, according to the annual trade report of Kenya and Uganda, for the year ended 1927. The sale proceeds of this commodity amounted to approximately $1,880. After deduction of auctioneers' commission and other expenses half of the proceeds is paid to the salvagers.

There is available to accredited American firms upon application to the Chemical Division a list of beauty shops in British Columbia.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Fennel, USP, 25 lb tins.....lb.	.80	.90	.85	.80	.85	.80
Geranium African, 25 lb tins..lb.	5.25	5.40	5.40	3.85	4.25	3.00
Bourbon, 28 lb tins.....lb.	4.90	5.05	5.85	4.25	4.90	3.00
Turkish, 28 lb tins.....lb.	3.25	3.35	3.35	3.00	3.35	2.45
Ginger, 1 lb bot.....lb.	6.60	6.85	6.85	6.00	6.75	4.80
Gingergrass, 28 lb tins.....lb.	2.50	2.70	2.70	2.50	2.70	2.50
Hemlock, 25 lb tins.....lb.	1.05	1.10	1.10	1.05	1.10	1.00
Juniper Berries, USP, 25 lb tins .....lb.	2.05	2.10	2.15	2.05	3.75	2.10
Wood, 50 lb tins.....lb.	.50	.60	.60	.50	.60	.50
LAVENDER, USP, 28 lb tins .....lb	3.25	3.40	3.40	3.25	3.85	3.00
Spike Spanish, 50 lb cans..lb.	.90	.95	.95	.90	1.05	.90
Lemon Ital, 25 lb cans.....lb.	3.35	4.00	5.75	3.35	4.85	2.30
California 35 lb cbys....lb.	3.00	3.15	4.65	3.00	4.35	1.85
Lemongrass, native, 50 lb cans .....lb.	.81	.83	.83	.81	.95	.81
Limes, expressed, 25 lb tins..lb.	25.00	28.00	28.00	20.00	25.00	9.25
Distilled, 25 lb tins.....lb.	9.50	9.75	9.75	7.75	8.50	6.00
Linaloe Mex., 70 lb cases....lb.	2.20	2.25	2.25	2.20	2.45	1.90
Mace, distilled, 50 lb tins....lb	1.75	1.80	1.80	1.75	1.85	1.60
Mandarin, 25 lb cases.....lb.	11.00	11.50	11.50	11.00	11.50	7.50
Mirbane, ref Aromatic Chemicals.....						
MUSTARD, USP, 1 lb bots.lb.	9.50	10.00	10.00	9.50	10.00	9.50
Artif, USP, 5 lb bot.....lb.	1.60	1.70	1.70	1.60	2.00	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot .....lb.	150.00	325.00	325.00	75.00	140.00	75.00
Petale, 1 lb bot.....lb.	160.00	170.00	170.00	160.00	170.00	160.00
Artificial, 1 lb bot.....lb.	5.00	15.00	15.00	5.00	15.00	5.00
Nutmeg, USP, 50 lb tins....lb	1.75	1.80	1.80	1.75	1.80	1.60
ORANGE BITTER, 25 lb tins .....lb	5.25	5.50	6.75	5.00	8.75	2.70
Sweet W Ind, 25 lb tins..lb	5.00	5.25	6.50	4.95	8.75	2.60
Italian, 25 lb cop.....lb.	5.10	5.35	7.35	5.10	9.00	2.80
American, Cold pressed 25 lb tins.....lb.	4.95	5.20	7.40	4.90	8.75	3.50
Distilled, 25 lb tins.....lb.	2.95	3.05	5.25	2.95	7.75	2.20
Spanish, 25 lb tins.....lb.	6.25	6.40	7.15	5.25	8.75	3.00
Oil Orris, concrete.....oz.	6.00	6.25	6.25	2.50	4.90	2.50
Origanum, 50 lb cans tech..lb.	.28	.30	.30	.28	.30	.28
Parsley, 1 lb bot.....lb.	.00	9.25	9.25	8.00	8.25	6.50
Patchouli, 5 lb bot .....lb.	8.25	8.50	8.75	6.75	13.00	7.25
Pennyroyal, dom, 25 lb tins..lb.	1.55	2.10	2.10	1.55	1.90	1.55
Imported, 25 lb tins.....lb.	.....	1.20	1.20	1.20	1.55	1.20
Pepper Black lb.....	10.25	.....	.....	.....	.....	.....
Peppermint, nat. 60 lb cases lb.	3.70	3.80	4.05	2.85	3.55	3.10
Redis, USP, 60 lb cs.....lb.	3.95	4.05	4.30	3.10	3.65	3.40
Petit Grain S A., 25 lb tins..lb.	1.95	2.05	2.05	1.90	2.10	1.50
French, 1 lb bot.....lb.	6.25	6.50	6.50	6.25	6.50	6.25
Italian, 25 lb tins.....lb.	2.20	2.30	2.30	2.20	2.30	2.20
Pimento, 25 lb tins.....lb.	2.50	2.75	2.75	2.25	3.25	2.55
Pineedle Siberian, cans.....lb.	.60	.65	.65	.60	.85	.65
Pinus, Sylvestris, 25 lb tins..lb.	1.90	2.00	2.00	1.90	2.00	1.90
Pumilio, USP, 25 lb tins..lb.	2.85	2.95	2.95	2.85	2.95	2.85
Rose Fr, 8, 16, & 32 oz pkgs..lb.	14.00	17.00	17.00	12.00	15.00	12.00
Bulg, 8, 10 & 32 oz pkgs...lb.	14.00	14.50	14.50	11.50	13.00	10.25
Rosemary, USP, 27½ lb tins..lb.	.....	.56	.56	.47½	.56	.47½
1000 lb drums.....lb.	.....	.50	.50	.42½	.45	.42½
Tech, 25½ lb tins.....lb.	.....	.40	.40	.40	.34	.34
Rue, 1 lb bot.....lb	3.15	3.25	3.25	3.15	3.25	3.15
SANDALWOOD, E Ind, USP, 100 lb case.....lb.	8.75	9.25	9.25	7.45	7.50	7.05
W Indian (Amayris), 25 lb tins.....lb.	2.85	2.95	2.95	2.25	2.65	2.30
Sassafras, USP, 50 lb cans...lb.	.85	.87	.87	.78	.85	.75
Artificial, 1000 lb drs, 60 lb cans.....lb.	.38	.40	.40	.26	.28	.26
Safrol, cans.....lb	.46	.48	.48	.28	.29	.28
Savin, 50 lb tins.....lb	1.65	1.80	1.90	1.65	1.90	1.70
SPEARMINT, USP, 50 lb tins .....lb	4.35	4.40	4.40	4.05	4.55	4.10
Spruce, 50 lb tins.....lb	1.05	1.10	1.10	1.05	1.10	1.00
Tansy, American, 25 lb tins..lb.	3.75	4.00	4.00	3.75	4.50	3.75
Tar, 50 gal bbls.....lb.	.25	.30	.30	.25	.30	.25
USP, 50 gal bbls.....lb.	.75	1.50	1.50	.75	1.50	.75
Thyme, red, NF, 25 lb tins..lb.	.78	.80	.90	.78	.90	.80
White, NF, 25 lb tins.....lb.	.83	.85	.90	.83	.90	.85
Tech, 110 lb drums.....lb.	.60	.70	.70	.60	.70	.60
Turpentine, USP, rect cbys..lb.	.27	.30	.30	.27	.30	.27
Vetivert Bourbon, 10 bot....lb.	6.25	6.50	6.50	6.25	6.75	5.85
Indian, 1 lb bot.....lb.	25.00	38.00	38.00	25.00	38.00	25.00
Java, 1 lb bot.....lb.	15.00	16.00	16.00	15.00	16.00	15.00
Wine, heavy, 1 lb bot.....lb.	1.65	1.75	1.75	1.65	1.75	1.65
WINTERGREEN Gaultheria, true, 25 lb tin.....lb.	8.00	10.00	10.00	8.00	10.00	8.00
Southern, 25 lb tins...lb.	3.75	4.00	4.00	3.75	4.00	3.75
Synthetic see Methyl salicylate.....						
Wormwood, dom, 25 lb tins..lb.	17.00	21.00	35.00	17.00	35.00	14.00
Wormseed, Balt, 25 lb tins..lb.	3.55	3.65	3.65	1.80	3.45	1.90
Ylang Ylang Bourbon, 10 lb tins No. 1.....lb.	9.50	9.75	9.75	9.50	10.50	8.50
10 lb tins No. 2.....lb.	8.25	8.50	8.50	8.25	8.50	6.75
Manila, 1 lb bot.....lb.	30.00	40.00	40.00	30.00	32.00	30.00

Oleoresins

Aspidum, USP, bot and tins..lb.	.....	1.25	1.45	1.25	2.10	1.50
Capsicum, USP, bot and tins.lb.	3.50	4.25	4.25	3.50	4.25	3.50
Cubeb, USP, bot and tins....lb.	3.00	3.25	3.25	3.00	3.25	3.00
Ginger bot and tins.....lb.	2.85	3.35	3.35	2.85	3.35	2.25
Malefern see Aspidum.....						

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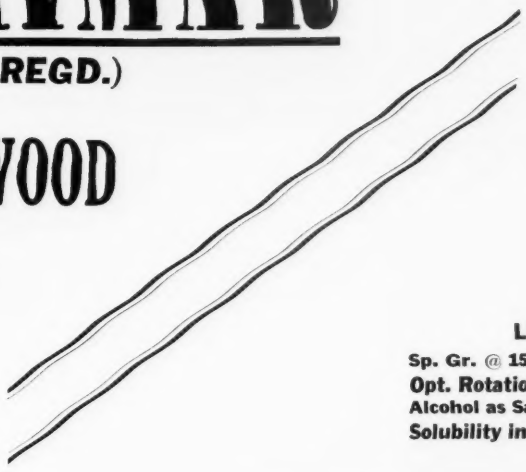

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{ Monthly Review }

Medicinal Imports Greater

Notable increases equalling nearly 40 per cent. are shown in the imports of quinine sulphate, all other quinine, alkaloids and salts of quinine during the first seven months of the current year. The quantity of menthol decreased approximately 7,000 pounds against an increase of approximately $120,000 in value. The following table shows the quantity and value of these products and certain other medicinals imported during the first seven months of 1928 and 1929:

	7 Months	
	1928 Value	1929 Value
Quinine sulphate	$378,323	$515,868
All other quinine and other alkaloids and salts from cinchona bark	159,163	239,607
All other alkaloids and salts	132,328	308,317
Menthol	580,062	699,734
Antitoxins, serums, vaccines, etc	1,139	1,152
Other medicinals	336,414	497,719
All other preparations, n. e. s.	1,418,055	1,708,835

According to Commercial Attache H. E. Watkins, Caracas, hydrogen peroxide is sold in Venezuela strictly on a price basis and recently one of the largest and most active Venezuelan wholesale drug houses placed a trial order with an American manufacturer for one gross of the 4-ounce bottles and one-half gross of the pint bottles. If the quality of the product compares favorably with the hydrogen peroxide now being handled by this firm, it is likely that it will result in increased business. The firm in question has a large force of salesmen traveling throughout Venezuela and is in a position to develop a wide distribution of medicinals. United States exports of medicinals to Venezuela increased from $645,000 in 1927 to $654,000 in 1928.

Carnauba Wax Facts

Brazilian carnauba wax is produced from the carnauba palm, and about 43 per cent. of the area of Brazil is suitable for its growth. The production centers, however, are chiefly in the northeastern states of Ceara, Piauhy, Parahyba, Rio Grand do Norte, and Maranhao. The most important ports of export are Fortaleza (capital and leading port of the State of Ceara) and Ilha do Cajueiro; exports are also made from Recife (Pernambuco), Bahia, and Rio de Janeiro.

According to official statistics, the exports of carnauba wax from Brazil during the period 1924-1928, inclusive, were as follows:

Year	Metric Tons	Value	Year	Metric Tons	Value
1924	25,451	$2,652,000	1927	34,112	$3,997,000
1925	34,062	3,836,000	1928 (11 mos.)	38,417	3,812,000
1926	38,649	3,600,000			

The leading countries of destination, in the order named, are the United States, Germany, Great Britain, and France.

According to the information furnished by a local exporter of the product, carnauba wax is graded as follows: Flora, yellow, clear; No. 1, yellow but spotty; No. 2, same as No. 1 but poorer quality; corduroso (North country) blackish in color; arenoso, greyish in color.

It is understood that the Brazilian Ministry of Agriculture places "(arenoso" before "corduroso." The grades are not sharply defined, the last four in particular merging

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Orris, bot & tins lb.	15.00	18.00	18.00	15.00	18.00	15.00
Pepper, black, USP, bot & tin lb.	.....	9.50	9.50	9.50	.....	.....
Vanilla, bot & tins lb.	8.00	8.75	8.75	8.00	8.75	8.00

Perfumer's Sundries

Almond Meal, 25 lb cans lb.	.20	.21	.21	.20	.21	.20
Amber liquid, 400 lb drs lb.	2.20	2.30	2.30	2.20	2.30	2.20
Ambergris, Black, boxes oz.	14.00	15.00	15.00	14.00	15.00	14.00
Gray boxes oz.	32.00	36.00	36.00	32.00	36.00	32.00
BALSAM COPAIBA Para, 80 lb cases lb.	.....	.33½	.34	.30	.49	.32
South American, USP, 80 lb cases lb.	.....	.37	.37	.33	.52	.35
Peru, 120 lb cases lb.	2.00	2.00	2.05	1.75	1.80	1.65
Tolu, 90 lb cases lb.	1.25	1.30	1.30	1.15	1.20	.95
Benzoin Gum, Siam, boxes lb.	1.20	1.30	1.30	1.20	1.30	1.20
Castoreum, 1 lb bot lb.	9.50	10.00	10.00	9.50	10.00	9.50
Chalk, Precip, 1 gt 175 bbls. lb.	.04½	.05	.05	.04½	.05	.04½
Cherry Laurel Water, 24 ltr cby lb.	4.10	4.60	4.60	4.10	5.60	4.10
Civet, Abyssin, horns oz.	2.10	3.00	3.00	2.10	3.00	2.10
Labdanum, 5 lb bot lb.	5.50	6.00	6.00	5.50	6.00	5.50
Lanolin, hydrous, 350 lb bbls lb.	.15	.16	.16	.15	.16	.15
Anhydrous, 350 lb bbls. lb.	.16	.17	.17	.16	.17	.16
Musk Pods Cabardine, tins lb.	.....	.....	.....	.....	.....	.....
Musk Tonquin, tins, Pods oz.	24.00	26.00	26.00	24.00	26.00	24.00
Grains Cabardine, tins oz.	.....	.....	.....	.....	.....	.....
Tonquin, tins, Grained oz.	28.00	34.00	34.00	28.00	34.00	28.00
Synthetic See Aromatic Chemical						
PETROLATUM, snow white, 350 lb bbls lb.	.12½	.13½	.13½	.12½	.13½	.12½
Light Amber, 350 lb bbls. lb.	.12½	.13	.13	.12½	.13	.12½
Rice Starch, 140 lb bags lb.	.09	.10	.10	.09	.10	.09
Rose Water, 24 ltr cbys cby.	5.00	5.50	5.50	5.00	5.50	5.00
Sandalwood, pwd bags lb.	.22½	.40	.40	.22½	.40	.22½
Saponin, 5 lb tins lb.	1.15	1.30	1.30	1.15	1.30	1.15
Talc, Italian, 220 lb bags ton.	60.00	80.00	80.00	60.00	80.00	60.00
French, 220 lb bags ton.	40.00	45.00	45.00	40.00	45.00	40.00

Drugs and Spices

Aconite Root, USP, bags lb.	.19	.20	.21	.19	.27	.19
Agar Agar, domestic, No. 1, 200 lb. lb.	1.40	1.45	1.45	1.40	1.40	.96
Almonds Meal lb.	.19	.20	.30	.15	.30	.15
Aletris Root, bags lb.	.36	.37	.38	.35	.42	.36
Alkanet Root, bags lb	.14	.15	.15	.11	.12	.10
ALOES, Cape, 400 lb cases. lb.	.14	.15	.18	.14	.18	.09½
Curacao, 100 lb cases lb.	.25	.26	.26	.19	.20	.12
Socotrine, Whole, 300 lb cs lb.	.35	.40	.50	.35	.45	.35
Althea Root, bags lb.	.20	.22	.22	.20	.22	.20
Cut cases lb.	.32	.39	.40	.32	.40	.33
Angelica Root, bags lb.	.25	.26	.28	.25	.25	.18
Angostura Bark, bags lb.	.22	.23	.26	.19	.18	.18
Anise Star case lb.	.12	.12½	.19	.12	.26½	.14
Spanish, bags lb.	.15	.15½	.19	.13½	.20	.13
ARABIC GUM, White, No. 1, 100 lb bags lb.	.37	.38	.38	.22	.27½	.22
Seconds, 200 lb bags lb.	.35	.36	.36	.16	.21	.16
Sorts, Amber, 220 lb bags lb.	.30	.32	.32	.11	.11½	.10½
Powd, USP, 300 lb bbls lb.	.33	.35	.35	.17½	.21	.17½
Areca Nuts, 100 lb bbls lb.	.10	.11	.11	.10	.12½	.10
Powd, 100 lb bbls lb.	.20	.22	.22	.14	.21	.15
Arnica Flowers, bales lb.	.50	.51	1.00	.50	1.50	.95
Root, bags lb.	.45	.46	.46	.35	.45	.35
Arrowroot, St. Vincent, powd bbls lb.	.10	.10½	.10½	.10	.10½	.10
Asafoetida, 250 lb cases lb.	.26	.29	.29	.23	.31	.25
Powd, 50 lb boxes lb.	.49	.50	.54	.46	.68	.50
Balm Gilead Buds, bags lb.	.35	.40	.40	.35	.40	.31
Balmony Herbs, bales lb.	.23	.25	.25	.18	.23	.18
Barberry Bark, of root, bags lb.	.18	.19	.20	.18	.32	.19
Bayberry Bark, bales lb.	.10	.11	.13	.10	.18	.12
Wax bbls lb.	.29	.32	.32	.29	.32	.29
BELLADONNA LEAVES, bales lb.	.18	.20	.20	.17	.23	.17
Root, bags lb.	.18	.19	.21	.18	.21	.19
Bees Wax, White, cases lb.	.55	.60	.60	.55	.60	.55
Yellow refined cases lb.	.41	.42	.42	.41	.42	.41
Berberis Aquafolium Root, bags lb.	.11	.12	.12	.10	.13	.10
Beth Root, bags lb.	.16	.17	.18	.16	.20	.17
Black Indian Hemp Root, 100 lb bags lb.	.18	.19	.19	.18	.20	.18
Blood Root, bags lb.	.18	.18½	.18½	.17½	.35	.21
Blueflag Root, bags lb.	.19	.20	.20	.19	.27	.17
Boldo Leaves, bales lb.	.15	.17	.17	.15	.17	.15
Boneset Herb, bales lb.	.11	.12	.12	.10	.10	.07½
Borage Flowers, bales lb.	.15	.16	.15	.14½	.17	.14½
Broomtop Herb Cut, bales lb.	.10	.11	.11	.10	.11	.10
Bryonia Root, bags lb.	.11	.12	.12	.11	.12	.10½
BUCHU LEAVES Short, 250 lb. bales lb.	.46	.47	.47	.36	.55	.42
Long bales lb.	.75	.80	.80	.75	.80	.75
Buckbean Leaves, bales lb.	.08	.09	.10	.08	.15	.13
Buckthorn Bark, bags lb.	.05	.05½	.05½	.05	.05½	.05
Berries, bags lb.	.45	.50	.50	.45	.50	.45
Burdock Root, bags lb.	.17	.18	.18	.13	.17	.11
Seed bags lb.	.40	.....	.65	.40	...	.65
Burgundy Pitch, 110 stand gross for net lb.	.08	.09	.09	.08	.09	.08
Imported lb.	.11	.12	.13	.11	.13	.12
Calabar Beans, bags lb.	.25	.26	.26	.22	.27	.22

- Arnica Flowers
- Belladonna Leaves
- Belladonna Root
- Buchu Leaves
- Chamomile Flowers
- Dandelion Root
- Digitalis Leaves
- Doggrass Root
- Fennel Seed
- Gentian Root
- Henbane Leaves
- Henna Leaves
- Insect Flowers
- Juniper Berries
- Lavender Flowers
- Licorice Cuttings
- Orris Root, Florentine
- Olive Oil, Italian
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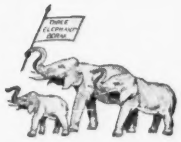

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Marble Nye Co., Boston, Mass. Worcester, Mass.
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into one another. The poor grading of the product is said to be the cause of considerable dissatisfaction and several dealers who formerly exported from Rio de Janeiro have given up the practice of shipping from this port, stating that the lack of proper grading of the wax in Ceara and other producing states made it impossible to export satisfactorily from Rio de Janeiro. (Consul General Claude I. Dawson, Rio de Janeiro).

Ipecac in Short Supply

Ipecac has advanced considerably over the past month. Spot prices are $4.00 to $4.25 with practically no material being offered, or if offers for delivery were made they were in small quantities only.

Strength in the primary market, with no offers being made, would lead to the belief that a spot shortage would prevail for some weeks. There are very little stocks on hand here and practically none coming in.

Gum Tragacanth Easy

Activity on the Constantinople gum tragacanth market showed a considerable improvement during the month of June, with total sales listed at 331 sacks, against 197 during May. This increase in sales was due to the success of local dealers in disposing of stocks consigned to European markets. The local market is now well supplied with stocks which are estimated to be sufficient to meet the demand until about the middle of September when the new crop is expected to reach this market. It is generally reported that the 1929 crop will be fairly abundant, due not only to the continuous and prolonged snowfall of the past winter that moistened the soil but also to the interest shown this year by some important concerns which advanced funds to growers. Stocks available on the market, July 15, 1929, consisted of 156 sacks of the 1927 crop, 533 sacks of the 1928 crop, 689 sacks altogether, to which may be added 90 sacks expected from the interior, making a total of 779 sacks.

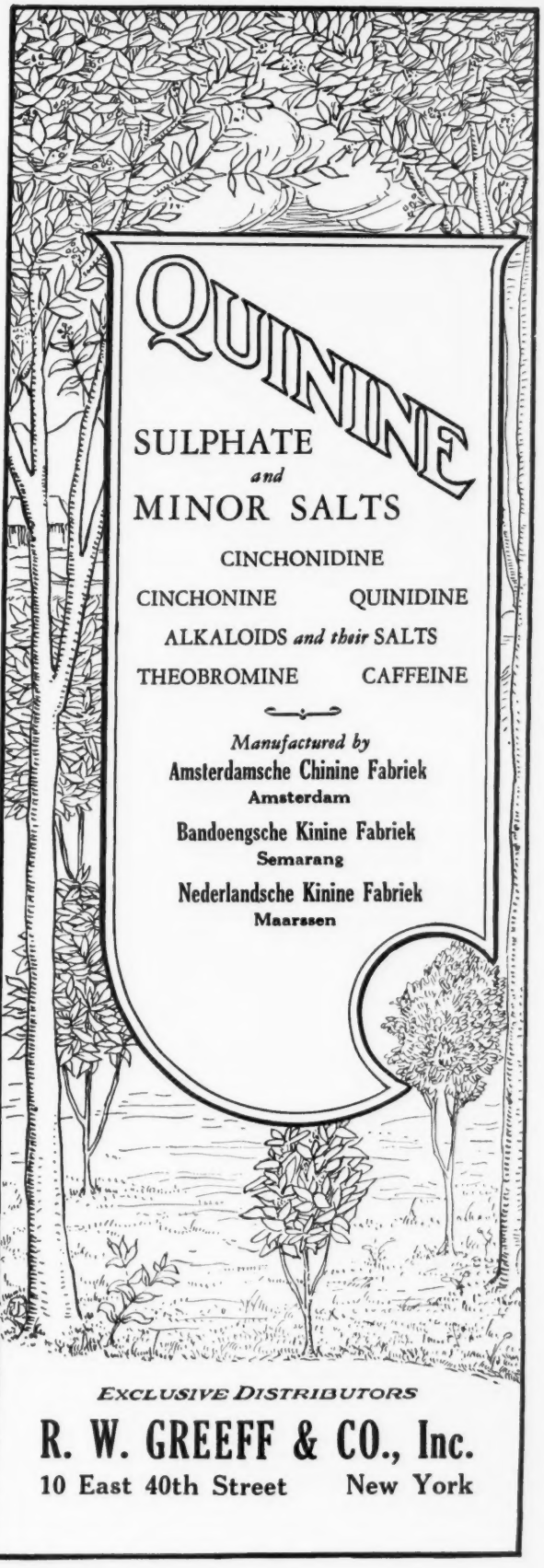
The interior grades which make up a large proportion of these stocks have sustained a slight decline, while the better grades which enjoy a good demand and are somewhat depleted. have shown an increase of several points. The fiori and tragacanth grades are exhausted locally. (Commercial Attache J. E. Gillespie, Constantinople).

Imports of tragacanth gum into the United States for the past two years and the first six months of 1929 have amounted to 1,434,000, 1,708,000, and 1,197,000 pounds, valued at $756,000, $882,000, and $525,000, respectively.

Buchu leaves are higher at 46c per pound with spot stocks not very plentiful. The primary market also presents a strong aspect with replacement stocks harder to get. Demand is good.

Digitalis is weak with prices being quoted here of 28c to 30c. This is due to the exceptionally large crop reported and in every likelihood prices will still seek a lower level.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Calamus Root, blchd cases..lb.	.45	.50	.52	.45	.50	.35
Unbleached, bags.....lb.	.06½	.07	.07	.06½	.07	.06½
Calendula Petals, imp bales..lb.	1.10	1.20	1.70	1.10	1.75	.85
Calisaya Bark, bales.....lb.	.21	.22	.22	.21	.23	.20
Powdered, bbls.....lb.	.26	.27	.27	.26	.32	.18
Canary Seed, South America, bags.....lb.	.07	.07½	.07½	.05	.05½	.04½
Dutch, bags.....lb.	.05½	.06½	.06½	.05½	.06½	.05½
Candelilla Wax, bags.....lb.	.27	.28	.28	.27	.28	.27
Cannella Alba Bark, bales...lb.	.30	.31	.31	.28	.32	.28
Cannabis, U.S.P.....lb	.24	.31	.33	.22	.....	.....
Cantharides, Chinese, cases..lb.	.42	.47	.55	.42	.72	.50
Powdered, boxes.....lb.	.65	.70	.80	.65	.88	.75
Russian, cases.....lb.	.50	.51	.55	.50	.70	.54
Powdered, boxes.....lb.	.65	.70	.75	.65	.80	.68
Caraway Seed, African, bags .....lb.	.05	.06	.06	.05	.12	.05
Dutch, 11 lb bags.....lb.	.10	.10½	.12	.09½	.12	.09½
Cardamon bleached, cases...lb.	1.50	1.60	1.75	1.50	2.00	1.50
Decorticated, cases.....lb.	1.40	1.50	1.60	1.40	1.60	1.25
Cascara Amarga, 150 lb bbls..lb.	Nom.	.....	.....	.....	.90	.90
So called bales.....lb.	.60	.85	.85	.60	.85	.60
CASCARA SAGRADA, 1926 bark.....lb.	.17	.18	.18	.15	.16	.15
1927 bark.....lb.	.15	.16	.16	.14	.15	.14
1928 bark .....lb.	.14	.15	.15	.13	.14	.13
Cascarilla Bark, quills, bales.lb.	.90	1.00	1.00	.90	1.00	.90
Siftings, bbls.....lb.	.65	.....	.65	.65	.65	.65
Cassia Batavia No. 1 bbls....lb.	.13½	.14	.15	.13½	.16	.13½
Shortstick, bales.....lb.	.10½	.11	.12½	.10½	.13	.11
Batavia No. 3, bales.....lb.	.09½	.09½	.11	.09½	.11	.09½
China Select Rolls, cases..lb.	.07	.07½	.09	.08½	.13½	.09
Broken, bales.....lb.	.09½	.10	.10	.09½	.10	.08½
Saigon, thin.....lb.	.30	.31	.39	.28	.39	.22
Buds, cases.....lb.	.26	.28	.28½	.16½	.19	.18½
Fistula, baskets.....lb.	.11	.12	.13	.10	.24	.11
Catnip, Herb, bales.....lb.	.19	.20	.23	.18	.23	.19
Celery Seed, bales.....lb.	.17½	.18	.19	.16¼	.21	.19
Ceresin Wax, White, bags...lb.	.15	.20	.20	.15	.20	.15
Yellow 200 lb. bags.....lb.	.11	.14	.14	.11	.14	.11
Imp. 100 lb. bags.....lb.	.25	.38	.38	.25	.38	.25
CHAMOMILE FLOWERS Roman, bales.....lb.	.45	.50	.50	.40	.50	.18
Hungarian, cases.....lb.	.22	.23	.26	.20	.24	.15
Charcoal Willow, powd, bbls.lb.	.06	.06½	.06	.06	.06½	.06
Wood, powd, bbls.....lb.	.04	.05	.05	.04	.05	.04
Chestnut Bark.....lb.	.07	.08	.08	.07	.....	.....
Leaves bales.....lb.	.05	.05½	.05½	.05	.06½	.05
Chicle Gum, lb bbls.....lb.	.58	.75	.75	.58	.75	.58
Chiretta, bales.....lb.	.28	.30	.30	.28	.30	.25
Cinnamon, Ceylon, No. 1, bales .....lb.	.40	.41	.62	.40	.62	.60
No. 2 bales.....lb.	.39	.40	.51	.39	.61	.55
No. 3 bales.....lb.	.55½	.56	.56	.55½	.56	.55½
Clover Tops, Red, bags .....lb.	.10	.11	.14	.10	.12	.10
Cloves Zanzibar, 135 lb bbl...lb.	.28	.28½	.38	.28	.38	.18
Cochineal, Black.....lb.	.69	.....	.69	.69	.69	.69
Silver.....lb.	.85	.....	.85	.85	.85	.85
Cohosh Root, Black, bags....lb.	.08	.09	.09	.07½	.09	.07
Blue, bags.....lb.	.10	.11	.12	.10	.12	.09
Colchicum Root, bags.....lb.	.08	.09	.09	.07	.07	.06
Seed, bags.....lb.	.75	.80	.85	.65	.70	.25
COLUMBO ROOT, bags...lb.	.15	.16	.20	.15	.20	.05
Colocynth Pulp, bales.....lb.	.26	.27	.45	.29	.110	.42
Coltsfoot Leaves, bags.....lb.	.08	.09	.09	.08	.12	.08
Comfrey Root, bags.....lb.	.11	.....	.14	.11	.14	.14
Condurango Bark, bags.....lb.	.15	.16	.17	.15	.16	.13
Coriander Seed, Morocco, bags .....lb.	.03	.03½	.06	.03	.13	.05
Bleached, bags.....lb.	.07½	.08	.11½	.07½	.19	.11
Corn Silk, bales.....lb.	.05½	.06½	.06½	.05½	.06½	.05
Cotton Root Bark, bales....lb.	.14	.15	.15	.12	.15	.12
Cowhage, 1 oz tins.....lb.	1.00	.....	1.00	1.00	1.00	.95
Cramp Bark so called bales..lb.	.06½	.07	.08	.06	.08	.05½
True, bags.....lb.	.35	.38	.48	.35	.55	.34
Craneshill Root, bags.....lb.	.10	.....	.10	.10	.12	.10
CUBEB BERRIES, XX bags .....lb.	.48	.53	.53	.48	.53	.48
Powdered, boxes.....lb	.50	.55	.55	.50	.55	.50
Culvers Root, bags.....lb.	.18	.19	.20	.18	.22	.18
Cumin Seed, Malta, bags....lb.	.13½	.13½	.13½	.12	.15	.12
Morocco, bags.....lb.	.13½	.14	.14	.12	.15	.12
Cuttlefish, Bone Trieste, Straps .....lb.	.25	.25	.25	.14	.14	.13
French, boxes.....lb.	.22	.23	.23	.12½	.15	.12½
Powdered, bbls.....lb.	.09	.10	.10	.09	.10	.09
Broken, bales.....lb.	.07	.....	.07	.05	.05	.05
Damiana Leaves, bales.....lb.	.17	.18	.18	.16	.30	.16
Dandelion Root, Imp. bags..lb.	.25	.27	.29	.19	.20	.14
Deer Tongue Leaves, bales...lb.	.11	.13	.13	.11	.18	.10
Digitalis Leaves, bales.....lb.	.28	.30	.70	.28	.70	.30
Dogwood Bark, Jamaica bags .....lb.	.09	.10	.11	.09	.10½	.09
American bales.....lb.	.06½	.....	.06½	.06½	.06½	.06½
Doggrass Root, USP, cut bags .....lb.	.12	.13	.13	.10	.13	.10½
Dragons Blood Mass, cases..lb.	.65	.70	.70	.65	.70	.65
Reeds, boxes.....lb.	2.40	.....	2.40	.90	.95	.95
Echinacea Root, bags.....lb.	.24	.26	.28	.24	.33	.26
Elcampane Root, bags.....lb.	.08	.09	.09	.08	.09	.08
Elder Flowers, bags.....lb.	.40	.45	.45	.22	.25	.19
Elemi Gum, 85 lb cases.....lb.	.26	.28	.28	.26	.28	.20
Elm Bark, bundles.....lb.	.35	.36	.36	.25	.27	.22
Grinding bags.....lb.	.13½	.14	.14	.13½	.14	.13½
Powdered, bbls.....lb.	.19	.22	.22	.19	.22	.19
Ephedra Vulgaris, bales.....lb.	.12	.13	.16	.12	.25	.15
ERGOT, 150-200 lb bags....lb.	.65	.75	.95	.65	2.50	.80
Eucalyptus Leaves, bales....lb.	.08	.09	.11	.07	.10	.06½
Euphorbia Pilulifera, Herb, bags.....lb	.09	.10	.11	.09	.10	.07½



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JNO C GOSSLER

Mgr. Dir.

Drugs and Spices

{ Monthly Review }

Vanilla Beans Strong

Vanilla Beans present a strong front at this writing, Mexican whole, being quoted at from $3.50 to $4.50 per lb. an advance of 10c per lb. Bourbon is also strong in tone at $2.00 and $2 30 per lb. as to quantity. The bourbon crop, it is reported, will run about 400 to 500 tons. Last year the crop totaled about 1,000 tons which is much above normal. It would seem that the growers have realized that a large crop such as this means a low price such as has prevailed for some time, and have therefore remedied the situation by planting less acreage with the result that a 500 tons maximum crop is reported and prices are likely to show improvement.

Chamomile Continue Short

Chamomile flowers have experienced another series of rejections by the Department due to high ash content, with the result that for the time at least, there is a spot shortage. This has been reflected in quotations for prompt delivery which are 2c higher at 22c .per pound. The number of rejections due to quality have had the effect in the primary market of slightly raising the price there, business being taken subject to passing tests.

Crude Drug Imports Increase

The total value of all crude drugs imported during the first seven months of 1929 amounted to only $5,548,989 against $6,216,168 for a similar period in 1928. As shown in the following table, all crude drugs enumerated showed quantity increases import value, excepting pyrethrum flowers, licorice extract, and senna:

	7 Months 1928 Pounds	7 Months 1929 Pounds
Cinchona bark	1,083,828	1,392,136
Pyrethrum	8,839,972	3,825,819
Licorice root	40,511,867	41,484,758
Licorice extract	598,548	625,740
Opium, crude	59,200	110,280
Senna	1,201,547	867,526
All other	14,500,190	16,425,779
Total	66,795,152	61,242,038

Arabic Imports Up

Camphor, tragacanth and arabic gum imports undergo interesting changes. A perusal of the accompanying table will reveal many interesting changes in the 1929 (seven months) imports of gum, resins, and balsams. The three camphors have an increased value of over a million dollars. Balsams show a slight decrease in quantity but an increase in value. Arabic and tragacanth gums are both imported in decreased quantities but the former shows a substantial increase in value against a decided drop in the latter.

	7 Months 1928 Pounds	7 Months 1929 Pounds
Camphor		
Natural, crude	2,712,665	3,290,311
Natural, refined	704,191	1,102,883
Synthetic	831,060	2,557,338
Balsams, crude	264,132	237,998
Arabic or senegal	7,553,042	7,442,952
Tragacanth	1,320,880	1,302,074
Other gums and resins	5,263,793	4,284,553

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Euphorbium Gum, cases....lb.	.14	.20	.20	.14	.20	.14
Fennel Seed, French, bags..lb.	.16	.17	.18½	.16	.25	.16½
German bags....lb.	.19	.21	.27	.19	.32	.20
Foenugreek Seed, 200 lb bags ....lb.	.06	.06½	.06½	.05	.06	.04½
Fish Berries, 100-125 lb bag..lb.	.06	.07½	.07½	.06	.07½	.06
Flax Seed, Whole ..182 lb bbls..	16.25	17.00	17.00	14.00	14.75	14.00
Ground, 180 lb bbls.....lb.	.09	.09½	.09½	.08	.08½	.08
Flea Seeds Black bags....lb.	.22	.24	.24	.20	.27	.16
Fringe Tree Bark or Root bags ....lb.	.19	.21	.24	.19	.27	.22½
Fumigating Pastiles, boxes..lb.	.30	.35	.35	.30	.35	.30
Galangal Root, bags.....lb.	.14	.15	.15	.14	.15	.11
Galbanum Gum, cans.....lb.	1.00	1.10	1.25	1.00	1.25	1.00
Gamboge Gum, 100 lb cases..lb.	1.10	1.15	1.25	1.10	1.35	1.10
Powdered, cases.....lb.	....	1.25	1.40	1.20	1.50	1.20
Gelsemium Root, bags.....lb.	.09	.10	.12	.09	.13	.09
GENTIAN ROOT, bags....lb.	.09½	.10½	.11	.09½	.11	.09
Ground bbls, boxes.....lb.	.13	.14	.14	.13	.14	.11
Powdered, bbls, boxes....lb.	.13	.14	.14	.13	.14	.12½
Ginger, African, bags.....lb.	.17	.17½	.17½	.13	.14½	.10½
Jamaica Grinding bags....lb.	19½	.20	.20	.18	.23	.17
Cochin ABC & Lemon, bags ....lb.	.17	.18	.18	.17	.20	.16
Ginseng Root, cultivated cs..lb.	8.00	10.00	10.00	8.00	10.00	8.00
Wild Southern, cases.....lb.	.....	16.00	16.00	16.00	16.00	8.50
Golden Seal Root, bags.....lb.	3.00	3.10	3.80	3.10	4.50	3.90
Powdered, boxes.....lb.	.....	3.70	4.35	3.70	5.25	4.60
Herb, barrels.....lb.	1.25	1.30	1.30	1.25	1.30	1.25
Grains of Paradise, bags....lb.	.35	.45	.85	.35	.60	.40
Grindelia Robusta, Herb, bale ....lb.	.11	.12	.12	.09	.12	.08½
Guaiac Gum, 150 lb cases....lb.	.35	.36	.38	.33	.40	.33
Strained 75 lb cases...lb.	.70	.75	.75	.70	.75	.70
Guarana, tin cases.....lb.	2.75	3.00	3.00	2.50	2.75	1.65
Hellebore Root, Black, bbls. lb.	.05½	.06	.06	.05½	.06	.05½
White, 250 lb bbls.....lb.	.07½	.08½	.08½	.07½	.08½	.07½
Powdered.....lb.	.11	.12	.12	.11	.14	.11
Helonias Root, bags.....lb.	.67	.69	.72	.62	.80	.67
Hemp Seed, bags.....lb.	.05	.06	.06	.05	.07	.03½
Henbane Leaves, USP, bales lb.	.18	.19	.20	.18	.23	.18
HENNA LEAVES, bales....lb.	.12	.13	.13	.12½	.13	.12½
Powdered.....lb.	.15	.16	.17	.15	.17	.16
Hops, bales.....lb.	.....	.28	.32	.28	.32	.25½
Horehound, Herb, bales.....lb.	.08	.09	.09	.08	.09	.07
Hydrangea Root, bales.....lb.	.....	.09	.09	.08	.09	.08
Insect Flowers.....lb.	.18	.20	.37	.18	.35	.22
Powdered, Pure, 200 lb bb ....lb.	.25	.35	.46	.25	.45	.32
IPECAC ROOT, Carteagna, bags.....lb.	4.00	4.25	4.25	2.70	3.30	2.35
Powdered, 220 lb bbls...lb.	4.30	4.45	4.45	3.20	3.65	3.15
Rio Whole, bags.....lb.	3.00	3.20	3.20	2.85	3.40	2.80
Powdered, 110 lb bbls...lb.	3.40	3.50	3.50	3.40	3.50	3.25
Isinglass, American, 130 lb cases ....lb.	.95	1.00	1.00	.95	1.00	.95
Russian (Beluga), boxes...lb.	4.50	.....	4.50	4.50	4.50	4.50
Jaborandi Leaves, bales.....lb.	.22	.22½	.22½	.11½	.13	.13
Jalap Root, Whole, 150 lb bag.....lb.	.42	.45	.45	.24	.21	.16
USP, Powd, 250 lb bbls....lb.	.47	.50	.50	.29	.26	.22
Japan Wax 24 lb cases.....lb.	.18½	.19	.19	.18½	.19	.18½
JUNIPER BERRIES, 125 lb bags.....lb.	.07	.07½	.09	.05	.07½	.05
Kamala, boxes.....lb.	.95	1.00	1.40	.82	1.00	.85
Karaya Gum, Powdered, bbls ....lb.	.12	.20	.20	.12	.13	.12
Kava Kava Root, bags.....lb.	.14	.15	.15	.14	.16	.15
Kino Gum, Black, cases.....lb.	.50	.55	.55	.50	.55	.50
Kola Nuts, 150 lb bags.....lb.	.14	15	.15	.13	.15	.09
Lady Slipper Root, bags....lb.	.90	1.00	1.30	.85	1.75	.78
Larkspur Seed, bags.....lb.	.50	.55	.55	.40	.45	.30
Laurel Berries, bags.....lb.	.08	.09	.09	.08	.09	.08
Leaves, Greek, bags.....lb.	.05½	.06	.06	.05	.07	.04½
Italian, bales.....lb.	.03½	.04	.04	.03½	.05	.03½
Lavender Flowers, Ordinary lb.	.32	.35	.35	.32	.35	.30
Selected.....lb.	.42	.43	.45	.43	.55	.40
Lemon Peel, bags.....lb.	.09½	.10½	.13	.10	.10	.09½
LICORICE ROOT, Whole bbls ....lb.	.12	.18	.18	.12	.18	.12
Spanish Natural bales....lb.	.05½	.07	.07	.05½	.07	.05½
Powdered, bbls.....lb.	.09	.10	.10	.09	.10	.09
Selected 2 & 5 lb bdls....lb.	.13	.15	.15	.12½	.16	.12½
Cutting, 125 lb bags....ln.	.06½	.07	.07	.06½	.07	.06½
Turkish, 150 lb bales....lb.	.05	.....	.05	.05	.05	.05
Linden Flowers with leaves, bales.....lb.	.23	.24	.27	.23	.33	.29
Without leaves, bales...lb.	.30	.31	.32	.30	.36	.27
Liverwort Leaves, bales.....lb.	.18	.19	.20	.18	.20	.16
Lobelia, Herb, bales.....lb.	.12	.13	.16	.12	.20	.15
Seed, bags.....lb.	.45	.50	.65	.45	.75	.65
Lovage Root, Imp., bags....lb.	.35	.37	.37	.25	.27	.25
Lupulin N. F., tins.....lb.	1.75	.....	1.75	1.75	1.75	1.75
Lycopodium, 88 lb. cases....lb.	.73	.75	.85	.73	1.00	.70
MACE SIAUW, No. 1, cases ....lb.	.84	.85	.86	.82	.98	.88
Banda No. 1, cases.....lb.	.92	.94	.98	.92	1.00	.94
Batavia No. 2, cases.....lb.	.47	.50	.58	.47	.68	.56
Malva Flowers, Blue, bales..lb.	.55	.57	.57	.40	.70	.45
Black, bales.....lb.	.40	.55	.60	.40	.60	.45
Leaves, bales.....lb.	.14	.15	.15	.14	.15	.14
Manaca Root, bales.....lb.	.....	.24	.24	.22	.22	.22
Manna, Large Flake, cases...lb.	.87	.89	.89	.75	.80	.65
Small Flake, cakes.....lb.	.62	.65	.65	.52	.60	.50
Sorts, cases.....lb.	.45	.50	.50	.45	.50	.45
Mandrake Root, bags.....lb.	.12	.13	.14	.12	.18	.13
Marjoram, Herb						
French, No. 1 bales.....lb.	.16½	.16½	.19	.16	.18½	.13½
German, bales.....lb.	.22	.22½	.23	.22	.18½	.12
Mastic Gum, 120 lb cans....lb.	.65	.70	.70	.65	.70	.60

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{ *Monthly Review* }

Jamaica Annatto Seed Exports

The following table sets forth the exportations from Jamaica of annatto seed during the calendar year ended December 31, 1928, which are the latest available figures on exports from the island, showing countries of destination, quantities, and values:

Destination	*Pounds*	*Value*
United States	470,673	£4,642
Denmark	242,611	2,391
Netherlands	68,507	676
France	46,324	457
United Kingdom	*20,295*	*200*
Australia	2,450	24
Bahamas	254	2
Total	851,114	£8,392

The United States is a very large consumer of crude drugs in the preparation of its medicines. Nearly $20,000,000 worth is ground annually, some from indigenous and some from imported drugs. Production figures for 1927, the latest available, record $9,205,243 against $8,444,361 for 1925.

Exports of crude drugs exclusive of ginseng for the past seven years have exceeded an average of $1,150,000 per year in value and for the first six months of 1929, $436,000. The average export value of ginseng for the past seven years has been approximately $2,500,000, while for the first six months of 1929 there were exported 136,000 pounds valued at $1,583,000, and in increase of 25,000 pounds and $513,000 over a similar period in 1928.

Imports of crude drugs (cinchona bark, pyrethrum flowers, licorice root, licorice extract, senna, etc.) for the past seven years have approximated an average yearly value of $8,770,000. The tendency for crude drug imports has been to increase. Imports for the first six months of 1929 were valued at $4,902,000. The values quoted are exclusive of gums, resins, balsams, and essential oils.

Although not produced in Iraz, gum asafetida reaches the Bagdad market from the Mohannerah area of Persia annually to the extent of 50 cases of two hundredweight each. Gum asafetida is used for medicinal purposes and also in producing an essential oil of the same name.

A part of Bagdad's imports is used locally and the rest is shipped to the London market, states Consul John Randolph, Bagdad. Bagdad price of gum asafetida is said to be about $3.63 per Stamboul mound (17½ pounds) or at the rate of about $0.21 per pound. A c. i. f. New York price is quoted at 40 cents per pound.

There are no official or other statistics available by which the foregoing information or estimates can be checked. The Iraz Customs Publications include gum asafetida with other gums and resins, the exports of which during the last three financial years were as follows: 1925-26—$12,032; 1926-27—65,347 kilos, $41,272; 1927-28—80,390 kilos, $26,054. These exports consist of a negligible quantity of gum arabic, from 25 to 45 per cent of gum tragacanth and the balance of miscellaneous gums.

Dragon's blood was in exceptionally small supply, the price advancing during the past month to $2.40 per pound. Although demand was light the price was well maintained.

Wormseed is strong, price advancing to $3.55 per pound. Reports have it that there will not be too much oil.

	Current Market		1929 High	1929 Low	1928 High	1928 Low
Matico Leaves, bales lb.	.30	.31	.32	.30	.45	.31
Mezereon Bark, bags lb.	.20	.25	.25	.20	.35	.20
Millet Seed, Yellow, bags lb.	.03½	.04½	.04½	.03½	.04½	.03½
Montan Wax, Crude, bags lb.	.06½	.07	.07	.06½	.07	.06½
Bleached, bags lb.	.25	.28	.28	.25	.28	.25
Moss, Iceland, bales lb.	.10	.12	.11	.10	.12	.07½
Irish, Bleached, bales lb.	.14	.17	.18	.13	.18	.11
Mullein Flowers, tins lb.	*1.35*	*1.40*	*2.00*	*1.35*	*2.25*	*2.00*
Leaves, bales lb.	.07½	.08	.98	.07½	.08	.07½
Musk Root, Russian, bags lb.	.09	.10	.12	.09	.25	.11½
Myrrh Gum, 200 lb. cases lb.	.38	.41	.65	.41	1.10	.55
Nutgalls, Chinese, bags lb.	.22	.....	.22	.22	.22	.22
Aleppy, bags lb.	.21	.....	.21	.21	.25	.21
Powdered, bags lb.	.23	.....	.23	.23	.23	.23
Nutmegs, 110's cases lb.	.27	.27½	.31½	.27	.38	.30
75's & 80's cases lb.	.39	.40	.42	.38	.50	.42
Grinding, bags lb	.24	.25	.25	.24	.29	.26½
NUX-VOMICA Buttons, bag lb.	.05	.06	.06	.05	.05½	.04
Powdered, 200 lb bbls. lb.	.08	.08½	.08½	.08	.08½	.08
Oak Bark, bags lb.	*.05*	*.05½*	*.05½*	*.05*	*.06½*	*.05*
Olibanum Gum, 280 lb cases Siftings lb.	.13½	.15	.15	.13	.11½	.13
Tears, No. 1 Extra lb.	.29	.30	.29	.27	.30	.26
No. 2 lb.	.21	.23	.23	.19	.20	.18
No. 3 lb.	.16	.18	.18	.15	.17	.14
Opium Gum, USP, cases lb.	12.00	13.00	13.00	12.00	13.00	12.00
Granular, cans lb.	*13.00*	*14.00*	*14.00*	*13.00*	*14.00*	*13.00*
Powdered, USP, cans lb.	13.00	14.00	14.00	13.00	14.00	13.00
Orange Flowers, cases lb.	.25	.....	.25	.25	.25	.25
Peel, Bitter, bags lb.	*.11½*	*.12½*	*.12½*	*.10*	*.11*	*.10*
Sweet bags, lb.	.15	.16	.16	.11	.08½	.08½
ORRIS ROOT, Flor. bid. bags lb.	.30	.32	.32	.17	.14½	.10
Powdered, 200 lb bbls. lb.	.34	.35	.35	.21	.17	.13
Verona, bags lb.	.24	.25	.25	.16	.13	.09
Powdered, 200 lb bbls. lb.	.....	.29	.32	.20	.14	.11
Fingers, boxes lb.	*1.15*	*1.20*	*1.20*	.90	.90	.80
Ozokerite Wax, Brown, Hard lb.	.....	.....	.....	.....	.....	.....
Bags lb.	.24	.25	.25	.24	.25	.24
Green, Hard, bags lb.	.30	*.31*	*.31*	.30	.31	.30
Yellow, Refined, bags lb.	.37	.....	.37	.37	.37	.37
Papain, Crude, 150 lb cases lb.	3.10	3.15	3.50	2.95	4.90	3.45
Pure, Powdered, 10 lb bot. lb.	*3.25*	*3.30*	*3.55*	*3.10*	*4.35*	*3.50*
Paprika, bags lb.	.28	.28½	.33	.28	.33	.23
Pareira Brava Root, bags lb.	.13	.14	.14	.11	.12	.11
Passion Flower, bales lb	*.10*	*.11*	*.75*	*.10*	*.15*	*.06½*
Patchouli Leaves, bales lb.	.22	.23	.23	.22	.29	.22
Pennyroyal, Herb, 100 lb bags lb.	.07	.....	.07	.07	.07	.07
Leaves, 100 lb bags lb.	.14	.16	.16	.14	.16	.14
PEPPERMINT LEAVES, Imp bales lb.	*.45*	*.47*	*.47*	*.43*	*.50*	*.43*
Domestic, bales lb.	.45	.46	.46	.24	.40	.24
Pichi Leaves, bags lb.	.13	.14	.16	.13	.14	.13
Pimento Select, bags lb.	.21	.21½	.30½	.21	.23	.16½
Pink Root, True, bags lb.	*.55*	*.57*	.60	.55	*.75*	.58
Pleurisy Root, bags lb.	.22	.23	.28	.21	.28	.22
Poke Berries, bags lb.	.....	.18	.30	.18	.30	.20
Root, 200 lb bales lb.	.08	.08½	.08½	.07½	.10	.07½
Pomegrant Bark of Root, bags lb.	.30	.35	.35	.20	.44	.20
Bark of Fruit, bags lb.	*.25*	*.30*	*.30*	*.25*	*.30*	.30
Bark of Tree, bags lb.	.18	.22	.22	.15	.21	.15
POPPY FLOWERS, Red, bags lb.	*.55*	.60	.60	.50	.65	.50
Heads, bags lb.	.50	.....	.50	.50	.50	.08
Prickly Ash Bark lb.	.14	.17	.17	.14	.17	.14
Southern bags lb.	*.13½*	*.14*	*.14*	*.13½*	*.16*	*.13½*
Northern, bags lb.	.15	.16	.18	.15	.25	.16
Berries, bags lb.	.20	.21	.21	.19	.22	.17½
Prince's Pine, bales lb.	*.33*	*.35*	*.35*	*.15*	*.17*	*.14*
Pulsatilla, Herb, bags lb.	.12	.13	.14	.12	.14	.11
Pumpkin Seed, bags lb.	.14	.15	.15	.14	.25	.14
Quassia Chips, bags lb.	*.06½*	.....	*.06½*	*.06½*	*.06½*	*.06½*
Quebracho, bulk, 125 lb. bbl. lb.	.30	.31	.31	.29	.36	.29
Root, bags lb.	.....	.07	.07	.07	.08	.07
Quince Seed, bags lb.	*.70*	*.80*	*.80*	*.70*	*.80*	*.60*
Cape, bags lb	.95	1.10	1.25	.80	1.50	.95
Rape Seed, South American, bags *lb.*	*.05½*	*.06*	*.06*	*.05½*	*.06½*	*.04½*
Dutch, bags lb.	*.07*	*.07½*	*.07½*	*.06*	*.07½*	*.05½*
Japanese, small bags lb.	.05½	.05¼	.07	.05½	.07	.06½
Raspberries, Dried, bbls. lb.	*.50*	*.60*	*.60*	*.45*	*.85*	*.45*
Red Saunders, bags lb.	.08	.....	.08	.08	.08	.08
Rhatany Root, bags lb.	.12	.13	.13	.11	.12	.11
Rhubarb Root, HD, cases lb.	*.31*	*.32*	*.41*	*.31*	*.45*	*.38*
Powdered, bbls lb	*.35*	*.36*	*.46*	*.35*	*.53*	*.43*
Rosemary Leaves, bales lb.	.05	.05½	.06	.04½	.06	.04½
Flowers, cases, bales lb.	*.25*	*.30*	*.30*	*.25*	*.30*	*.25*
Rose Petals, pale lb.	.40	.41½	.42½	.40	.45	.38
Red lb.	1.65	1.70	1.80	1.65	2.20	1.70
Rue, Herb, bales lb.	.18	.20	.20	.18	.20	.18
Sabadilla Seed, bags lb.	.29	.30	.34	.29	.35	.30
Powdered, bbls lb.	.35	.36	.39	.30	.38	.32
SAFFRON FLOWERS, American, bales lb.	.30	.35	.40	.30	.40	.29½
Valencia, 1 lb cans lb.	11.25	11.75	12.00	11.00	16.00	11.25
Sage Dalmatian, bales lb.	*.05½*	*.06*	*.06*	*.05½*	*.07*	*.05½*
Greek, bales lb.	.05½	.06	.06	.05½	.06	.04½
Sandarac Gum, 300 lb bbls. lb.	.70	.75	.75	.40	.43	.30
Sarsaparilla Root, Honduras, bales lb.	.54	.55	.55	.54	.58	.52
Mexican, bales lb.	.26	.28	.40	.26	.29	.20
Sassafras Bark, Ordinary, bales lb.	.14	.16	.16	.14	.17	.13½
Select, bales lb.	.24	.26	.28	.24	.27	.23
Savory Leaves, bale lb.	.08½	.09	.09	.08½	.10	.07½
Saw Palmetto Berries, bags lb.	.10	.11	.12	.10	.20	.11

{ Monthly Review }

Pyrethrum Position

Pyrethrum flowers exported from Trieste to the United States during the period 1922-28 were as shown in the following table:

Year	Pounds	Value	Year	Pounds	Value
1922	1,522,424	$417,770	1925	1,334,431	$232,342
1923	812,352	313,696	1926	1,626,365	172,771
1924	596,674	219,000	1927	398,655	56,210

During recent years by no means all pyrethrum flower exports from Dalmatia are shipped through Trieste, a large proportion being sent through Ragusa and Spalato, as follows: via Trieste in 1926, 1927, and 1928—800,200 and 260 metric tons, respectively, and via Ragusa in the same years, 300, 200, and 250 tons, respectively.

The various grades of Dalmatian pyrethrum are offered at the prices, f. o. b. Trieste, as follows, as compared with the prices prevailing in the summer of 1928; Summer of 1928—closed, 16.-lire; semi-closed 14.50/15.-lire; mixed, 13.00/13.50-lire; open, 12.50-lire; summer of 1929—closed, 12.-lire; semi-closed, 10.50/11.-lire; mixed, 10.-lire; open 9.50-lire. (At the present rate of exchange 19-lire are equivalent to one dollar United States currency.) The general factors affecting prices are the amount of the local crop, the price trend of Japanese pyrethrum, and demand. All crop estimates must be accepted with considerable reserve. The flowers are picked from June to August.

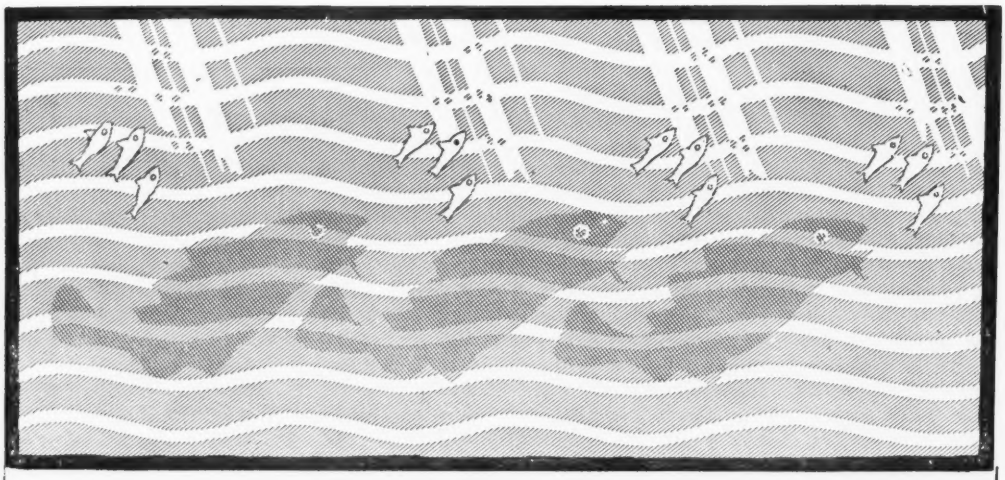
Whereas the 1927 crop is estimated to have reached some 700 tons, production for 1928 is not believed to have exceeded 400-500 tons, the dimunition resulting from the reduction in acreage sown in 1925. In 1926 and 1927 larger areas were put under cultivation so that the crops for 1929 and 1930 will, it is expected, prove somewhat larger than that for 1928. The consequence of the diminished crop in 1928 was a rising market with few sellers and many buyers. However, the abnormal price level reached by autumn induced a cautious waiting attitude among buying interests, which caused the Dalmatian industry to be left, notwithstanding the smallness of the crops, with a large unsold surplus. With this large carryover, with the expectation of a large crop for 1929 and alleged price cutting by the Japanese industry, the market appears to be declining. In the view of well-informed local dealers, the trend of the market is determined by the Japanese. (Consul Walter H. Sholes, Trieste).

Imports of pyrethrum flowers into the United States from all countries during 1927, 1928, and the first six months of 1929 were 8,993,000, 13,639,000 and 3,701,000 pounds, valued at $1,220,000, $3,692,000 and $1,027,500, respectively.

Golden Seal Weak

Golden seal root is in a weak position selling down to $3.00 from a high last month of $3.25 per pound. This represents weakness in the primary market where competition is reported as keen and the root in good supply. The decline in this commodity has been steady since the high of the year in March of $3.70 per pound. The monthly declines are as follows: March, $3.70; April, $3.70; May, $3.50; June, $3.45; July, $3.45; Aug., $3.45; Sept., $3.25; Oct., $3.00.

	Current Market	1929 High	1929 Low	1928 High	1928 Low
Scammony Resin, boxes.....lb.	1.30	1.35	1.35	1.30	1.35	1.30
Root, bags.....lb.	.08½	.....	.08½	.08½	.08½	.08½
Senega Root, bags.....lb.	1.00	1.05	1.35	1.00	1.40	1.27
SENNA ALEX., 150 lb cases lb.	.25	.30	.30	.25	.30	.25
Half leaf 150 lb cases....lb.	.12½	.14½	.15	.12½	.15	.13
Sifting, 400 lb bales...lb.	.11	.11½	.11½	.10½	.11	.10½
Tinnevelly, Bold, 350 lb bales .....lb.	.16	.18	.18	.16	.20	.15
Medium Leaf.....lb.	.11	.12	.12	.10	.13½	.09
Small Leaf,.....lb.	.07	.09	.10	.07	.10	.07
Pods, 350 lb.....lb.	.08	.08½	.09	.08	.13	.08½
Powdered, 200 lb.....lb.	.....	.11	.11	.11	.10	.11
Serpentaria Root, bags.....lb.	.67	.70	.72	.65	.77	.70
Shellac, T. N., bags.....lb.	.57	.58	.58	.57	.58	.57
Simaruba Bark, bales.....lb.	.20	.25	.40	.20	.38	.08
Skullcap Leaves, Eastern, bales .....lb.	.....	.40	.40	.40	.40	.33
Western, bales.....lb.	.18	.19	.20	.18	.26	.18
Skunk Cabbage, Striped, bales .....lb.	.14	.16	.16	.14	.16	.14
Snake Root, Canada Natural, bags.....lb.	.27	.28	.28	.24	.30	.24
Canada, Stripped, bags...lb.	.55	.....	.55	.55	.55	.55
Soap Bark.....lb.	.14	.15	.15	.14	.15	.14
Cut, 125-175 lb bags...lb.	.12	12½	.16	.12	.17	.16
Crushed, 200 lb bbls....lb.	.16	.....	.16	.16	.17	.16
Powdered, bbls.....lb.	.17	.....	.17	.17	.18	.18
Spearmint Leaves, American, bales.....lb.	.28	.33	.33	.25	.30	.25
Spermaceti, blocks, cakes, cases .....lb.	.32	.35	.35	.32	.35	.32
Spikenard Root, bags.....lb.	.18	.18½	.20	.18½	.25	.20
Squaw Vine, bales.....lb.	.20	.21	.21	.18	.21	.21
Squills, White.....lb.	.09	.10	.13	.09	.16	.08
Powdered, bulk.....lb.	.23	.25	.25	.20	.30	.15
Stavesacre Seed, bags.....lb.	.16	.17	.18	.16	.18	.15½
Stillingia Root, bags.....lb.	.09	.10	.12	.09	.12	.10
Stone Root, bags.....lb.	.08	.09	.09	.08	.09	.08
St. Ignatius Beans, bags....lb.	.14½	.15	.15	.14½	.15	.14½
St. John's Bread, bags.....lb.	.....	.09	.09	.09	.14½	.09
STRAMONIUM LEAVES, bales.....lb.	.18	.20	.20	.18	.20	.16
Seed, bags.....lb.	.07½	.....	.07½	.07½	.07½	.07½
Strophanthus Seed, Kombe, bags.....lb.	2.25	2.50	2.50	2.00	3.00	2.00
Styrax Liquid, Artificial.....lb.	.26	.35	.35	.26	.35	.26
Genuine, USP.....lb.	.40	.45	.45	.40	.45	.36
Sunflower Seed, bags Calif...lb.	.06	.07	.07	.06	.09	.06
South American, bags....lb.	.07	.07½	.07½	.07	.07½	.06
Tamarinds, bbls.....lb.	.09½	.10	.10	.05	.06	.05
Kegs.....keg	3.85	.....	3.75	3.85	3.85	3.85
Tansy, Herb, bales.....lb.	.15	.16	.16	.11	.14	.11
Thus Gum, 280 lb bbls.....lb.	.11½	.20	.20	.11½	.20	.11½
THYME, Spanish, bales....lb.	.11½	.12	.12	.08½	.09	.08½
French, bales.....lb.	.10	.10½	.10½	.08	.08½	.07
Tonga Root, bundles.....lb.	.42	.....	.42	.42	.55	.42
Vine, bundles.....lb.	.42	.....	.42	.42	.55	.42
Tonka Beans, Angostura Cases .....lb.	1.75	1.85	2.00	1.75	2.00	1.90
Para cases.....lb.	.90	.....	.90	.90	.90	.90
Surinam cases.....lb.	1.00	1.10	1.50	1.00	1.50	1.25
Tragacanth Gum, No 1, 100 lb cases.....lb.	1.45	1.50	1.60	1.50	1.60	1.55
No. 2.....lb.	1.30	1.40	1.50	1.30	1.50	1.40
No. 3.....lb.	1.10	1.20	1.30	1.10	1.30	1.25
Powdered, 50 lb boxes....lb.	.90	1.00	1.10	.90	1.10	.85
Turkish cases.....lb.	.50	.90	.90	.45	.45	.45
Turmeric Root Madras, bags.lb.	.08½	.08½	.09	.08½	.12	.06
Aleppy bags.....lb.	.08½	.09	.10	.08½	.13	.06½
Powdered.....lb.	.13	.15	.15	.13	.15	.10
China bags.....lb.	.11	.12	.12	.11	.11	.09
Turpentine Venice True, 80 lb cases.....lb.	.32	.40	.40	.32	.40	.3
Artificial, 80 lb cases....lb.	.17	.....	.17	.17	.17	.12
Uva Ursi Leaves, bales....lb.	.06	.06½	.06½	.06	.07	.07
Valerian Root, Belgium, bags .....lb.	.24	.25	.30	.21	.30	.16
VANILLA BEANS, Mexican, whole, cases.....lb.	3.50	4.50	4.50	3.25	4.00	4 3.25
Cuts, cases.....lb.	3.15	3.30	3.30	2.50	2.75	2.50
Bourbon, cases.....lb.	2.00	2.65	2.65	1.85	2.75	2.00
South American, cases....lb.	.....	3.00	3.00	2.50	2.75	2.50
Tahiti, Green, label cases..lb.	1.75	2.00	2.50	1.75	2.50	2.25
Vetivert Root, 100 lb bags..lb.	.25	.....	.25	.25	.30	.25
Violet Flowers, bags.....lb.	.75	.80	1.00	.68	.90	.63
Wahoo Bark of Root, bags..lb.	.50	.51	.56	.51	.62	.51
Bark of Tree, bags.....lb.	.25	.26	.31	.25	.35	.25½
White Pine Bark, Roseed, bags .....lb.	.07½	.09½	.15	.07	.08	.07
White Poplar Bark, bags...lb.	.06	.07½	.07½	.05½	.07	.05½
Wild Cherry Bark, Thin, Green .....lb.	.14	.15	.20	.14	...	.....
Rossed bales.....lb.	.11	.12	.12	.11	.12	.11
Thick Rossed, bales....lb.	.09	.....	.09	.09	.09	.09
Thin Natural, bales....lb.	.08	.09	.09	.07½	.08	.07½
Thick Natural, bales...lb.	.06	.06½	.06½	.05	.06	.05
Wild Indigo Root, bags.....lb.	.14	.15	.15	.13	.14	.13
Willow Bark, bags.....lb.	.05	.05½	.05½	.05	.06	.05
White, bags.....lb.	.15	.....	.15	.15	.05	.15
Witch Hazel Bark, bags....lb.	.07	.08	.08	.05½	.08	.06½
Leaves, bales.....lb.	.07	.08	.08	.06½	.....	.....
Wormseed, American, bags..lb.	.10	.11	.13	.10	.20	.15
Levant, bags.....lb.	3.65	3.80	4.15	3.65	5.25	4.25
Wormwood, Herb, Imp., bales .....lb.	.08	.08½	.10½	.08	.10½	.10
Dock Root, bags.....lb.	.10	.11	.11	.10	.11	.10
Yerba Mate, bags.....lb.	.18	.20	.20	.18	.20	.18
Santa, bags.....lb.	.10	.11½	.11½	.09½	.11	.90½
Zedoary Root, bags.....lb.	.07	.08	.08	.06½	.07	.06½



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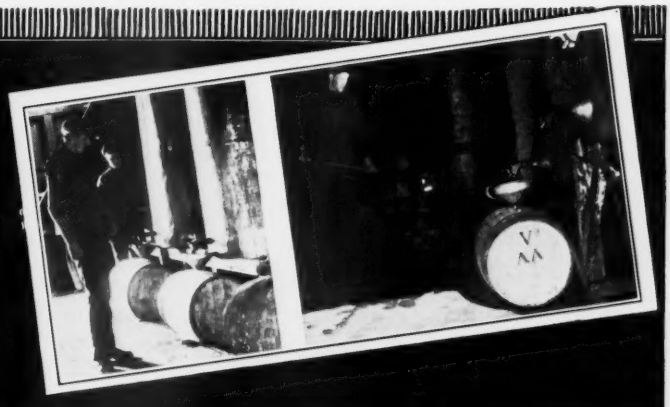

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Pharmaceutical Subjects

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Stability of Solution of Arsenous and Mercuric Iodide U. S. P. X.—By W. J. Husa and W. W. F. Enz. The effect of 100 different substances on the stability of Donovan's solution were studied. Minimum deterioration occurred at pH of 4. Stability was increased by storage of completely filled amber bottles in refrigerator or by replacing air in the bottles with an inert gas. By a modification a more stable solution has been made. Light of the wave lengths between 3,200 and 4,600 A accelerates deterioration.

Haziness of Final Chloroformic Extractions in Alkaloidal Assaying—By George E. E'we. Haziness may be due to almost colloidal suspension of trace of aqueous liquid extracted, which contaminates chloroformic extract with ammonium sulfate and water. Ammonia liberated during evaporation neutralizes some of sulfate readily. Means of insuring clarity outlined.

Influence of Light upon Hydrogen-ion Concentration and Stability of Certain Pharmaceuticals—By John C. Krantz, Jr., and C. Jelleff Carr. The hydrogen-ion concentration changes in certain galenical preparations, namely tincture of digitalis, elixir glycero phosphate comp., elixir of iron, quinine, strychnine, fluidextract of cascara and essence of pepsin under the influence of light of various wave lengths were studied.

Studies on the Acid-Base Equilibrium of Tincture of Digitalis—By John C. Krantz, Jr. A study of the hydrogen-ion concentration of tincture of digitalis and its resistence to change upon the addition of acid and alkali.

Effect of Buffering the External Phase upon the Stability of Emulsions—By John C. Krantz, Jr. A study of the stability of emulsions of mineral oil and olive oil when the external phase is buffered to a definite hydrogen-ion concentration.

Suggestions Relative to U. S. P. X. Revision—By Jules Bebie. Ether, alcohol and water solubilities, melting and boiling point determinations, and preparation of sample for arsenic test are discussed, and improvements suggested.

Comments on Some Tests and Assays of the U. S. P. X.—By Herbert C. Kassner. Modified method for conducting certain test and assays are given. Some of the general tests and processes are also criticized.

Standardization and Stabilization of Veratrum Preparations: The Hydrogen-ion Concentration Factor—By E. E. Swanson and C. C. Hargreaves. The effect of dilution with distilled water and alcohol and reading the lethal dose at the end of ½ hour and 12 hours studied in developing a bio-assay for veratrum. The hydrogen-ion concentration is found to be important in stabilizing veratrum preparation.

Standardization and Stabilization of Ergot Preparations: The Hydrogen-ion Concentration Factor—By E. E. Swanson. Assays by the cockscomb method and reversal of the uterus on a number of U. S. P. fluidextracts were found to give correlative results. Some technical problems of the uterus method were studied. The hydrogen-ion concentration was found to be important in stabilizing ergot preparation.

Stability of Anesthetic Ether in Containers of Various Types—By E. Van Deripe, L. W. Greene and R. E. Schoetzow. Ether in tin cans, copper plated tin cans, and amber glass stoppered bottles was kept under observation for a period of fifteen months, and ten fresh containers were opened each month and examined. The work confirmed information previously reported, that ether remains stable in copper plated containers only.

Evaluation of Pharmaceutical Glassware—By N. Storm and James C. Munch. The reaction of a large number of types of glassware as bottles, vials and ampoules with a number of alkaloids and indicator solutions under various conditions of temperature and pressure are reported. A set of standard tests are outlined and standards for reaction recommended.

Argentine Veterinary Products Demand

Increased killings of hogs by Argentinian packing houses during the past few years are tending to stimulate interest in hog raising and the potential demand for cholera serum is likely to increase.

The diseases most common to Argentina livestock include anthrax, foot-and-mouth disease, tuberculosis, lock-jaw, contagious abortion, hog cholera, fistula, etc. There is a very good demand for vaccines and serums and developments of the past few years have tended to stimulate sales. The Argentine Government has promulgated sanitary decrees affecting the shipment, slaughter, and export of infected animals. The fear that important foreign markets for meats may be lost through diseased livestock has led to increased interest in vaccines and serums. The demand for such products is chiefly supplied by local manufacture and imports from the United States, but there are no statistics at hand showing the respective amounts obtained from each source. Most serums of European origin are excluded by that provision of the law prohibiting the importation of goods manufactured in countries where a disease called "rouget" is prevalent. Australian serums are also sold.

There is no prejudice against American serums in Argentina and their excellent quality is generally recognized and admitted. Some of the local products are also quite satisfactory. It is anticipated that national manufacturers will continue to strive to obtain a greater share of the market. (Consul General George S. Messersmith, Buenos Aires.)

Charles E. McManys, president of Crown Cork & Seal Co., will sail for Europe next Wednesday on business connected with Crown Cork International Corp., of which he also is president.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

Of Drug Markets, published monthly at Pittsfield, Mass., for October 1, 1929.

State of New York, County of New York—ss.

Before me, a notary public in and for the State and county aforesaid, personally appeared Thomas R. Farrell, who, having been duly sworn according to law, deposes and says that he is the Editor of the Drug Markets, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Drug Markets, Inc., 25 Spruce St., New York, N. Y.; Editor, Thomas R. Farrell, 25 Spruce St., New York, N. Y.; Managing Editor, none; Business Manager, Frazer V. Sinclair, 25 Spruce St., New York, N. Y.

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of the stockholders owning or holding one per cent. or more of the total amount of stock should be given.) Drug Markets, Inc., Frazer V. Sinclair, Thomas R. Farrell.

3. That the known bondholders, mortgagees, and other security holders owning or holding one per cent. or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given, also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

Thomas R. Farrell, Editor.

Sworn to and subscribed before me this 9th day of October, 1929. J. Oscar Fischer. (My commission expires Notary Public, Bronx Co., Clerk's No. 474, N. Y. C. C., No. O-598, N. Y. Reg., No. 9287, March 1930.)

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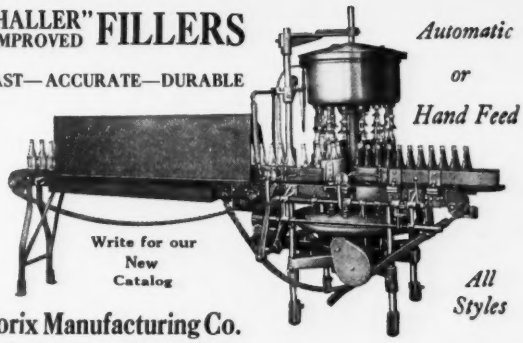

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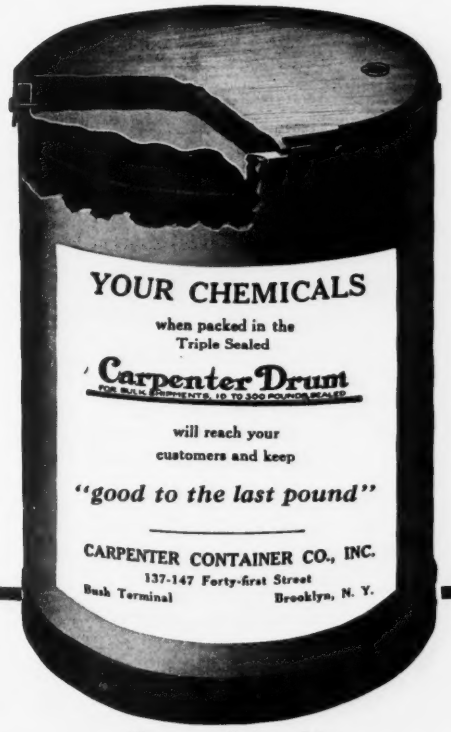

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